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ABSTRACT

The major goals of the Hawaii Integration Project have been to: (1) promote the development of social interactive skills in severely handicapped children to facilitate their acceptance by and adjustment to integrated community settings; (2) develop effective methods of training (including inservice) to prepare general education teaching staff, nonhandicapped students, administrative and state agency staff and parents of handicapped and nonhandicapped and other community constituents to successfully adjust to the inclusion of severely handicapped children/youth into community settings; and (3) describe parameters of realistic, mutually beneficial, and rewarding peer interaction patterns between severely handicapped and nonhandicapped children/youth which can endure and generalize to other appropriate situations. Activities have included the development of an interactive process, inservice training and a social skills curriculum component for severely handicapped children and youth. Outcomes have included validated training models for these activities and the social skills curricular strategy packages. Sixty-seven severely handicapped project children/youth--ranging in age from 3-8 years and diagnosed as severely to profoundly retarded, severely multiply handicapped, autistic and deaf-blind--participated in project activities at five public school settings enrolling primarily regular education children. Project staff has included a project director, a curriculum coordinator, a part-time inservice training coordinator, a part-time program trainer at each school setting, and support staff. Both the University of Hawaii Department of Special Education, College of Education and the personnel who have been involved in the project brought to the project extensive professional experience in the areas directly relevant to project activities--including educational programming for severely handicapped children/youth, school and community integration of severely handicapped children/youth, and inservice training of educational personnel. (Author/CL)

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Final Report

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PROMOTING THE INTEGRATION OF SEVERELY HANDICAPPED CHILDREN INTO SCHOOL/ COMMUNITY SOCIAL SYSTEMS

September 1983

U.S. DEPARTMENT OF EDUCATION

Office of Special Education

ABSTRACT

The major goals of the project have been to: (1) promote the development of necessary and beneficial social interactive skill level and behaviors in severely handicapped children to facilitate their their acceptance by and adjustment to integrated community settings; (2) develop effective methods of training (including inservice) to prepare general education teaching staff, nonhandicapped students, administrative and state agency staff and parents of handicapped and nonhandicapped and other community constituents to successfully adjust to the inclusion of severely handicapped children/youth into community settings; and (3) describe and develop those parameters of realistic and mutually beneficial and rewarding peer interaction patterns between severely handicapped and nonhandicapped children/youth which can endure and generalize to other appropriate situations outside of and beyond the intervention settings.

Activities have included the development of an interactive process, inservice training and the development of a social skills curriculum component for severely handicapped children and youth. Outcomes have included validated training models for these activities and the social skills curricular strategy packages.

Sixty-seven severely handicapped project children/youth--ranging in age from three through eighteen years and diagnosed as severely to profoundly retarded, severely multiply handicapped, autistic and deaf-blind--participated in project activities at five public school settings enrolling primarily regular education children on the island of Hawaii and Oahu in the State of Hawaii. Project staff has included a project director, a curriculum coordinator, a part-time insevice training coordinator, a part-time program trainer at each school setting, and support staff. Both the University of Hawaii Department of Special Education, College of Education and the personnel who have been involved in the project brought to the project extensive professional experience in the areas directly relevant to project activities--including educational programmingfor severely handicapped children/youth,school and community integration of severely handicapped children/youth, and inservice training of educational personnel.

Table of Contents

		Page
Chapter 1	Introduction.	1
Chapter 2	Special Friends Program	25
Chapter 3	Training of School and Community Constituents for Integration	33
Chapter 4	Social Skills Curriculum for Severely Handicapped Students.	39
Chapter 5	Formative and Summative Evaluation.	45
Chapter 6	Dissemination	125
Chapter 7	Discussion of Findings and Implications	141
References	. . . . .	145
Appendix A:	Position Paper.	149
Appendix B:	Inservice Training Materials.	161
Appendix C:	SIOS and Observers' Schedule	191

CHAPTER 1

Introduction

Promoting the Integration of Severely Handicapped Children into School/Community Social Systems Project, known locally as the Hawaii Integration Project, has been funded by the Office of Special Education, U.S. Department of Education, as a three-year model demonstration project to develop curriculum components, activities and materials which promote the integration of the severely handicapped. The three major goals of the project have been: 1) the development of social interaction skills by severely handicapped children which will help them adjust to integrated environments; 2) the development of training methods and materials to prepare educators, administrators, state and community agency staff, parents, and nonhandicapped students to include severely handicapped students in integrated activities; and 3) the promotion of mutually beneficial and rewarding peer interactions between children who are not handicapped and those who are severely handicapped.

The premise of this project is that all handicapped children--without exception--have the right to receive an education in a neighborhood public school which is close to home and which serves primarily nonhandicapped, chronological age peers according to the law of natural proportion (Brown, Branston, Hamre-Nietupski, Johnson, Wilcox, & Gruenewald, 1979; Brown, Ford, Nisbet, Sweet, Donellan, & Gruenewald, 1982; Sontag, Certo, & Button, 1979; Voeltz, 1980; and Hemphill & Noonan, 1983). This integration is clearly indicated by both legislative mandate and increased public support and acceptance of handicapped persons into the community (Taylor, 1982). A position paper written by Norma Jean Hemphill and Mary Jo Noonan, which was adopted as a policy position by the Department of Special Education, College of Education, University of Hawaii, further clarifies and supports the integration of all severely handicapped children in their neighborhood public school (Appendix A).

Legal Arguments for Integration

These arguments have already been well established. The initial right-to-education cases mandated that education be provided in the most normalized educational settings as possible and that it be provided by the public school system (cf., Pennsylvania Association for Retarded Children vs. Commonwealth of Pennsylvania, 1971; Maryland Association for Retarded Children vs. Maryland, 1974; Mills vs. D.C. Board of Education, 1972). The decisions in these cases were based upon the civil rights case of Brown vs. Topeka Board of Education, which ruled that separate and segregated schooling was unconstitutional. Clearly, it was the intent of the right-to-education rulings that public school education be provided in the regular public schools.

Legislative support for integration and the opportunities for interaction among disabled and nondisabled students was precisely delineated in Public Law 94-142, the Education of All Handicapped Children Act of 1975, and in Section 504 of the Rehabilitation Act of 1973. P.L. 94-142 and Section 504 each defined the concept of the least restrictive environment

to include integration and opportunities for interaction to the maximum extent possible as part of an appropriate education plan. Section 504 further stated that architectural barriers were no longer acceptable reasons for excluding disabled students or individuals from programs.

Social-Ethical Arguments

These arguments focus primarily on societal attitudes about disabled persons, the deleterious effects produced by social segregation, and the efficient use of societal resources. In arguments for integration or opportunities for interaction, it is suggested that positive or accepting attitudes of nondisabled individuals towards disabled individuals cannot be expected or taught if the nondisabled individuals never encounter disabled individuals. Without such opportunities, it is understandable that many attitudes in the society are negative and perceptions about individuals with disabilities are often inaccurate. Brown, Branston, Hamre-Nietupski, Johnson, Wilcox, & Gruenwald (1979) suggest an even more compelling reason for affecting positive or accepting attitudes among nondisabled students: the nondisabled students are the service providers and parents of the disabled students of tomorrow.

There is now considerable evidence that systematic interventions designed to promote positive social interactions between severely handicapped and nonhandicapped children result in significantly more positive behaviors and attitudes by both groups of children (Rynders, Johnson, Johnson, & Schmidt, 1980; Voeltz, 1980a, 1980b, 1982; Voeltz & Brennan, 1982). Additional research supporting positive attitudinal changes by both groups can be found in Chapter 5--Formative and Summative Evaluation --of this report. These positive changes appear to occur simply as a function of exposure over time, such that placement of self-contained classes on a general education campus will result in increasingly more positive attitudes toward children with handicaps by regular education children in comparison to the attitudes expressed by children who have no such exposure (Voeltz, 1980a, 1982). However, structured and systematic interaction experiences between the children is most clearly associated with significant improvements on various social behavior measures (Rynders et al., 1980; Voeltz, 1982; Voeltz & Brennan, 1982). Clearly, the Hawaii Integration Project has added considerable support to research on positive changes in attitudes by nonhandicapped peers toward their severely handicapped peers and improvements on various social behavior measures (see Chapter 5--Formative and Summative Evaluation).

Bricker (1978) also indicates that integration has the potential of altering societal attitudes through not only changes in peers' attitudes but also changes in the attitudes of parents of nondisabled peers, parents of disabled students, regular education teachers, and special education teachers. Such a shift in attitudes has the possibility of improving the attitudes of disabled students towards themselves. And such improvements in self-images are very important because it has been demonstrated that negative labels produce deleterious effects (Ysseldyke & Algozzine, 1982).

The final social-ethical argument for integration is suggested by both Bricker (1978) and Brown et al. (1979): it is a more efficient allocation of resources to educate disabled and nondisabled students in the same school. For example, segregated schooling requires the unnecessary duplication of many staff roles, such as administrators, secretaries, cafeteria workers, janitors, etc. Because of declining enrollments, many school buildings are only being partially used now. If the enrollments could be made larger with the integration of disabled and nondisabled students, then perhaps some of these buildings could be used for other purposes and the upkeep of all the buildings would be more cost effective.

Psychological-Educational Arguments

Bricker (1978) suggests that an integrated environment may be educationally superior to a segregated environment because an integrated one may create more demanding and motivating situations for the disabled students. Obviously, the presence of more competent peers can provide a greater opportunity for the disabled students to learn through observation and imitation (Bricker, 1978; Brown et al., 1979; Stainback, Stainback, & Hatcher, 1983). Concerns that the nondisabled students will imitate and adopt maladaptive behaviors of the disabled students are not substantiated by the research (Bricker, 1978).

Two additional reasons why physical, programmatic and attitudinal integration are essential for the optimum development of severely handicapped learners:

1. Natural contexts are necessary for the development of functional and generalized skills and behaviors which will allow maximum individual adjustment and independence in both current and future environments.

A major reason for placing severely handicapped children into integrated school and other community environments, is, of course, to provide them with the actual, natural learning context to develop the skills needed to function as independently as possible as adults in the community (Brown, Hamre-Nietupski, & Nietupski, 1976). Such skills are best taught and practiced in the real world, not in artificial and segregated settings and simulations or natural situations (Falvey, Brown, Lyon, Baumgart, & Schroeder, 1980). By establishing classrooms for severely handicapped students in the general education community, teachers, parents and the handicapped students themselves are exposed to the natural cues, correction procedures, and contingencies likely to be available on a continuing basis, as opposed to various manipulations and simulations provided in highly artificial instructional situations. Highly structured, one-to-one discrete trial instruction in isolated classroom settings may have indeed resulted in the acquisition of behaviors in that classroom, but there is no guarantee that such skills will transfer to functional use outside the instructional environment. Particularly if severely handicapped students display severe learning problems, it seems crucial that educators follow the principle of "zero inference" in instructional programming (i.e., that we not infer that learning will generalize to criterion skills

in criterion environment), but instead teach such skills directly (Brown, Hamre-Nietupski, & Nietupski, 1976). Teaching functional responses in integrated, community environments is today's "educational best practices" rather than a minority professional opinion or even an untested educational innovation.

2. Integrated environments and interactions with nonhandicapped persons are necessary for the development of social competence by severely handicapped persons.

An equally compelling reason to return services for severely handicapped learners to neighborhood public schools and other integrated community environments is a concern for social competence. Segregated environments serving only severely handicapped individuals generally provide only two possible social interaction opportunities: a) the severely handicapped person can interact with another severely handicapped person; and b) the severely handicapped person does indeed interact with a large number of "helpers", including teachers, therapists, ward personnel, work supervisors, psychologists, custodial staff, cafeteria workers, physicians, dentists, volunteers, etc. Clearly, the only "peer" type interaction which is even possible is with other children whose developmental and behavioral characteristics may be similar, but not necessarily conducive to a variety of social interactions. Patterns of social interaction between severely handicapped peers can and should be facilitated and encouraged (see Landesman-Dwyer & Berkson, 1979, for a review of this topic, and Certo & Kohl, 1983, for a curriculum effort in this direction), but it also seems inappropriate that these be the only truly social opportunities available to a severely handicapped learner. In all other interactions with caregivers and professionals, the severely handicapped person is the recipient. S/he is helped to do something by a more competent performer, who sets the rules and generally requires rather rigid adherence to established expectations. This limited range of social experiences cannot promote social competence nor does it allow for the development of rewarding social relationships. We have simply not acknowledged the restrictive nature of the caregiver-client and teacher-child interaction, which currently dominates all planned and spontaneous social interactions experienced by severely handicapped children in special education settings isolated from their nonhandicapped peers.

Schools Participating in Hawaii Integration Project

The Hawaii public schools serving handicapped children which participated in this project are DeSilva Elementary and Waimea School on the island and district of Hawaii, Kainalu Elementary in the Windward District of the island of Oahu, and Jarrett Intermediate and Kaimuki Intermediate Schools in the Honolulu District of the island of Oahu.

DeSilva is a K-6 elementary school located in Hilo on the island of Hawaii which also comprises the Hawaii School District. There are 20 classes for the 357 pupils. It supports various special education settings

for LD and MR children and it houses the District Special Education Center with the project's SMH and Deaf-Blind classes.

Waimea is a K-9 elementary-intermediate school located in Kamuela on Hawaii. There are 32 classes for 616 pupils. It also includes various settings for handicapped children and the project class for young (CA 3-8) SMH children which is staffed with a teacher and aide and has appropriate ancillary services available.

Kainalu is a K-6 elementary school located at Kailua in the Windward District on the island of Oahu. There are 41 classes for 723 pupils. It provides resource settings, integrated self-contained and self-contained classes for most categories of handicapped children. Kainalu already had supported several special education settings when, in the fall of 1977, it became the first Hawaii public school to serve SMH children in the new District Center concept. Three SMH classrooms and two classrooms for severely mentally retarded (SMR) children participated in the project at Kainalu including a total of twenty-six students ranging in age from 3-18. Each of the Kainalu classrooms is staffed by a full-time teacher and educational assistant, and full-time Speech, OT and PT are staffed at Kainalu to provide related services to each child in accordance with IEP specifications.

Jarrett Intermediate School is located in Palolo Valley in the Honolulu District on the island of Oahu. Jarrett serves 508 children in grades 7-9. In addition to the regular education enrollment, Jarrett continues to provide resource services for mild-moderately handicapped children (MRE, LD and SED). Jarrett's involvement in the project focused, however, upon the establishment of the first SMH class on a public secondary school campus serving primarily regular education children.

Kaimuki Intermediate School serves 982 children in grades 7-9 in the Honolulu District on Oahu, and has also served mild-moderately handicapped children through resource and integrated self-contained services (EMR, SED, LD and hearing impaired) in past years. Kaimuki enrolled several MRT and SMR/PMR/Autistic self-contained classes beginning in fall 1980 for the first time; these classes represented the redistribution of moderately to profoundly retarded children to regular education campuses from the last remaining public, self-contained, special education school in Hawaii serving this population, Pohukaina School.

At each of the school settings (Waimea, DeSilva, Kainalu, Jarrett and Kaimuki), project children have frequent opportunities to interact with both higher functioning level special education students and regular education students. Demographically, the schools represent a socio-economically heterogeneous, multicultural population and provide a mixture of rural (Waimea), large suburban (Kainalu), small suburban (DeSilva) and urban (Jarrett and Kaimuki) school settings.

Students Participating in Hawaii Integration Project

A total of 81 severely handicapped students received direct services during the 1980-1981 school years; 53 were directly served throughout the 1981-1982 school year and 53 were directly or indirectly served during the 1982-1983 school year in both school and community settings. In addition, 24 severely handicapped students were directly served in five replication schools in the Jefferson County Public Schools in Louisville, Kentucky. Table 1, 2 and 3 provide information on each participant, including age, diagnosis, sex and an adaptive behavior measure score. These children are variously diagnosed as severely multiply handicapped, severely to profoundly retarded, deaf-blind, autistic, and moderately retarded with severe behavior disorders/emotional disturbances.

In addition, over 125 moderately/severely handicapped children have received indirect services consisting of Special Friend's replication interaction programs, social curriculum consultation as requested, and evaluation assistance at five additional public school replication sites on Oahu and Kauai; over 25 moderately retarded children are also receiving services in the programmed interactions at two of the project sites. Table 1.1 provides a description of Special Friends Field Test School Sites.

Goal #1: Develop social interactive skills in severely handicapped children/youth.

Student growth and development in project objectives

In Spring, 1981, social-emotional IEP goals and objectives were developed and implemented for 55 project youngsters. A total of 167 objectives were generated and entered onto student IEPs. Of these objectives, 114 were implemented by project staff and classroom teachers with all project students (except for 4 who had prolonged absences due to illness, hospitalization, etc.) having at least one social skill program as part of their total instructional program. Evaluation by program trainers and teachers of student performance on these objectives indicate that there were 27 objectives mastered, 79 objectives that pupils made progress on, and 8 that were not appropriate and/or no progress occurring by June, 1981. By December, 1981, all project children/youth had goals and objectives in the area of socio-emotional and social skills development re-evaluated. The updated and revised social goals and objectives developed by Ms. Gloria Kishi, Curriculum Coordinator, and teachers of the severely handicapped during this time period are displayed in Table 1.2. These objectives were entered onto the student's IEP, and all project children and youth received training on the IEP goals and objectives in the area of socio-emotional and social skills development from December through May, 1982. Meetings were help in May, 1982, to evaluate pupil progress on these objectives. Results are displayed in Table 1.3. The objectives may have included acquisition of such skills as awareness and responsiveness to environmental

TABLE 1.1

Special Friends Field Test School Sites

Description of School[a]	Site[b]	Diagnoses[c]	Participant Children: Handicapped Ages	Handicapped n[d]	Nonhandicapped Grades	Nonhandicapped n[d]	Year(s) Involved
PSE (Kainalu)	Primary	SMH, TMR	3-19	30	K-6	67	1977-1982
PSE (DeSilva)	Primary	SMH, Deaf-Blind	3-11	9	K-6	58	1980-1982
PSE (Waimea)	Primary	SMH, Deaf	2-9	7	K-6	48	1980-1982
PSE (Honowai)	Replication	SMH, SMR, PMR, TMR	4-20	18	4-5	100	1978-1982
PSS (Kailua)	Primary	TMR	13-16	7	7	13	1978-1979
PSS (Kaimuki)	Primary	SMR, PMR, Autistic	16-20	16	7-9	59	1980-1982
PSS (Jarrett)	Primary	SMH	13-18	5	7-9	25	1981-1982
PSE (Waikiki)	Replication	Autistic	6-9	5	4-	11	1980-1981
PSE (Pearl City)	Replication	TMR	7-11	14	5-6	85	1981-1983
PSE (Pearl Harbor Kai)	Replication	TMR	6-14	32	4	57	1981-1982
PSE (Barbers Point)	Replication	SMH, TMR, Autistic	3-12	28	5-6, 3-4	115	1981-1982
PSE (Jefferson)	Primary	SMH	6-9	9	1-3	31	1980-1981
PSE (Aliiolani)	Replication	SMH	6-13	10	4	20	1981-1982
PSE (Wilcox, Kauai)	Replication	SMH	4-16	9	4	70	1981-1983
PSS (Kammerer, Kentucky)	Mainland Replication	SPH	13-14	5	7-9	25	1982-1983
PSS (Bruce Middle, Kentucky)	Mainland Replication	SPH, Visually Impaired	11-14	3	7-9	25	1982-1983
PSS (Waggener, Kentucky)	Mainland Replication	SPH, Blind	17-18	3	10-12	3	1982-1983
PSE (Minors Lane, Kentucky)	Mainland Replication	SPH, Visually Impaired	4-9	7	K-6	182	1982-1983
PSE (Lowe, Kentucky)	Mainland Replication	SPH, Blind/Visually Impaired	7-10	6	K-6	53	1982-1983

[a] PSE = Public School Elementary; PSS = Public School Secondary (intermediate). All are general education campuses.

[b] Primary = Project staff participated directly in program; Replication = Project staff provided only consultation and evaluation support.

[c] SMH = Severely Multiply Handicapped; SMR = Severely Mentally Retarded; SPH = Severely Profoundly Handicapped; PMR = Profoundly Mentally Retarded; TMR = Moderately (Trainable) Mentally Retarded.

[d] These numbers are estimates for the numbers of participants per year.

TABLE 1.2

Progress of IEP Social Objectives
by Project Youngsters (n=57)[a]
December, 1981

School	ID	Sex	Age	IEP Obj	Mast.	Prog.	No Prog.
Kainalu	01	F	10	1.1		x	
				1.2	x		
				1.3*			
	02	F	11	1.1	x		
				1.2	x		
	03	M	12	1.1	x		
				1.2	x		
	04	F	10	1.1*			
	05	M	8	1.1		x	
				1.2*			
	06	F	15	1.1	x		
				1.2			
	07	F	14	1.1		x	
				1.2*			
				1.3*			
	08	F	10	1.1	x		
				1.2	x		
				1.3	x		
	09	F	14	1.1	x		
				1.2	x	x	
	10	M	15	1.1		x	
				1.2*			
				1.3*			
	11	M	6	1.1		x	
				1.2		x	
				1.3		x	
	12	F	6	1.1			x
				1.2*			x
	13	F	9	1.1	x		
				1.2		x	
				1.3		x	
				1.4	x		
	14	F	6	1.1		x	
				1.2		x	
	16	F	10	1.1		x	
				1.2		x	
				1.3*			
	17	F	12	1.1	x		
				1.2	x		
	18	M	18	1.1	x		
				1.2	x		
	20	F	7	1.1	x	x	
				1.2	x		
	21	F	13	1.1		x	
				1.2		x	
				1.3			x
	23	M	6	1.1	x		
				1.2		x	
	24	M	12	1.1	x		
				1.2		x	
	25	F	8	1.1		x	
				1.2		x	
				1.3*			
	26	F	12	1.1	x		
				1.2		x	
				1.3		x	
	28	10		1.1	x		
				1.2	x	x	
				1.3		x	
				1.4		x	

TABLE 1.2 (continued)

School	ID	Sex	Age	IEP Obj	Mast.	Prog.	No Prog.
Jefferson	32	F	6	1.1 1.2 1.3		x x x	
	33	M	6	1.1 1.2		x x	
	34	F	7	1.1 1.2 1.3		x	x x
	35	F	7	1.1 1.2 1.3 1.4		x x x	x
	36	F	5	1.1 1.2 1.3 1.4		x x x x	
	37	F	6	1.1 1.2		x x	
	38	M	9	1.1* 1.2 1.3*		x	
	39	M	6	1.1 1.2		x x	
	40	F	6	1.1 1.2 1.3	x x	x	
Kaimuki Intermed.	41	M	17	1.1 1.2 1.3		x x x	
	42	M	19	1.1 1.2 1.3	x x x		
	43	F	19	1.1* 1.2* 1.3*			
	44	M	18	1.1 1.2 1.3	x x	x	
	45	M	20	1.1 1.2 1.3	x x x		
	46	F	19	1.1 1.2 2.1		x x x	
	47	M	16	1.1 1.2 2.1*		x x	
	48	F	16	1.1 1.2 1.3		x x x	
	49	M	16	1.1 1.2 1.3	 x x	x	
	50	F	18	1.1 1.2 1.3	x x	 x	
	51	M	19	1.1* 1.2* 1.3		 x	
	52	M	17	1.1 1.2* 1.3*		x	
	53	M	17	1.1* 1.2* 1.3*			
	54	M	19	1.1 1.2 1.3	 x x	x	

TABLE 1.2(continued)

School	ID	Sex	Age	IEP Obj	Mast.	Prog.	No Prog.
DeSilva	56	F	6	1.1 2.1		x x	
	57	F	10	1.1 1.2 2.1 2.2		x x x x	
	58	M	5	1.1 1.2 2.1		x x x	
	59	M	8	1.1 1.2 1.3		x x	x
	61	M	4	1.1 1.2 1.3 2.1		x x x	x
Waimea	62	M	6	1.1 1.2 1.3		x x x	
	63	M	9	1.1* 1.2 2.1 2.2	 x	 x x 	
	64	F	7	1.1 1.2* 1.3 2.1* 2.2 2.3	 x	x x x 	
	65	F	3	1.1 1.2 1.3* 2.1 2.2		x x x x	
	66	F	6	1.1* 1.2* 2.1*	(In hospital for surgery)		
Jarrett	29	M	13	1.1 1.2		x x	
	30	M	18	1.1 1.2		x x	
	31	F	15	1.1 1.2		x x	
	69	F	17	1.1 1.2		x x	
	70	M	14	1.1 1.2		x x	

*Not implemented

[a]IEP social objectives were developed and implemented in Spring 1981 for all project youngsters who were enrolled in project school sites during year 1981-82. Evaluation of progress on these objectives were completed in September 1981.

[b]Jefferson School's classes for the severely multiply handicapped were relocated to another school campus thus youngsters do not participate in project activities.

TABLE 1.3

Progress on IEP Social Objectives
by Project Youngsters (n=57)[a]
May, 1982

School	ID	Sex	Age	IEP Obj	Maint.	Prog.	No Prog.
Kainalu	01	F	10	1.1 1.2* 1.3*		x	
	02	F	11	1.1 1.2*	x		
	03	M	12	1.1 1.2*	x		
	04	F	10	1.1*			
	05	M	8	1.1 1.2*		x	
	06	F	15	1.1 1.2	x		
	07	F	14	1.1 1.2* 1.3*		x	
	08	F	10	1.1 1.2* 1.3*	x		
	09	F	14	1.1 1.2	x	x	
	10	M	15	1.1 1.2* 1.3*		x	
	11	M	6	1.1 1.2* 1.3*		x	
	12	F	6	1.1 1.2*			x
	13	F	9	1.1 1.2* 1.3* 1.4*	x		
	14	F	6	1.1 1.2*		x	
	16	F	10	1.1 1.2* 1.3*		x	
	17	F	12	1.1 1.2*	x		
	18	M	18	1.1 1.2*		x	
	20	F	7	1.1 1.2		x	
	21	F	13	1.1 1.2* 1.3*			x
	23	M	6	1.1 1.2*		x	
	24	M	12	1.1 1.2		x	
	25	F	8	1.1 1.2* 1.3*			x
	26	F	12	1.1 1.2 1.3	x	x x	
	28	10		1.1 1.2 1.3 1.4	x	x x x	
Jarrett Intermed.[b]	29	M	12				
	30	M	18				
	31	F	15				

TABLE 1.3(continued)

School	ID	Sex	Age	IEP Obj	Mast.	Prog.	No Prog.
DeSilva	56	F	6	1.1 2.1		x x	
	57	F	10	1.1 1.2 2.1 2.2		x x x x	
	58	M	5	1.1 1.2 2.1		x x x	
	59	M	8	1.1 1.2 1.3		x x	x
	61	M	4	1.1 1.2 1.3 2.1		x x x	x
Waimea	62	M	6	1.1 1.2 1.3		x x x	
	63	M	9	1.1* 1.2 2.1 2.2	x	x x	
	64	F	7	1.1 1.2* 1.3 2.1* 2.2 2.3	x	x x x	
	65	F	3	1.1 1.2 1.3* 2.1 2.2		x x x x	
	66	F	6	1.1* 1.2* 2.1*	(In hospital for surgery)		

*Not implemented

[a]IEP social objectives were developed and implemented in Spring 1981 for all project youngsters who were enrolled in project school sites during school year 1981-82. Evaluation of progress on these objectives were completed in September 1981.

[b]Since the class did not move to the project school site until September 1981, no IEP social objectives were developed and implemented for the Jarrett students.

TABLE 1.3(continued)

School	ID	Sex	Age	IEP Obj	Mast.	Prog.	No Prog.
Jefferson	32	F	6	1.1 1.2 1.3		x x x	
	33	M	6	1.1 1.2		x x	
	34	F	7	1.1 1.2 1.3		x	x x
	35	F	7	1.1 1.2 1.3 1.4		x x x	x
	36	F	5	1.1 1.2 1.3 1.4		x x x x	
	37	F	6	1.1 1.2		x x	
	38	M	9	1.1* 1.2 1.3*		x	
	39	M	6	1.1 1.2		x x	
	40	F	6	1.1 1.2 1.3	x x	x	
Kaimuki Intermed.	41	M	17	1.2 1.3		x x x	
	42	M	19	1.1 1.2 1.3	x x x		
	43	F	19	1.1* 1.2* 1.3*			
	44	M	18	1.1 1.2 1.3	x x	x	
	45	M	20	1.1 1.2 1.3	x x x		
	46 47	F M	19 16	1.1 1.2 2.1 1.1 1.2 2.1*		x x x x x	
	48	F	16	1.1 1.2 1.3		x x x	
	49	M	16	1.1 1.2 1.3	 x x	x	
	50	F	18	1.1 1.2 1.3	x x	 x	
	51	M	19	1.1* 1.2* 1.3		 x	
	52	M	17	1.1 1.2* 1.3*		x	
	53	M	17	1.1* 1.2* 1.3*			
	54	M	18	1.1 1.2 1.3	 x x	x	

stimuli, toy play and object manipulation, leisure time activities, and/or social interactions with adults and with handicapped and nonhandicapped peers. As part of the project's overall goal to facilitate the integration of project participants, each IEP objective contained some reference to interactions with nonhandicapped peers as part of the instructional strategy and/or evaluation of pupil progress data.

In order to implement the identified IEP goals and objectives, the project arranged for and/or facilitated the occurrence of the following: (1) joint recess/play periods between handicapped and nonhandicapped students, (2) schedule changes in classrooms to allow for increased opportunities for peer-peer interactions, (3) adaptation/acquisition of play materials to encourage appropriate toy play and leisure time activities, and (4) arrangement of the physical environment of the classroom to promote and facilitate interactions.

Evaluation activities relating to severely handicapped student growth

Major evaluation activities related to measurement of integration outcomes for severely handicapped students were conducted throughout the three year project and required considerable staff time, including: (1) pre and posttesting (Table 1.4) of project students on the TARC (Fall '80, Fall '81, Spring '82), (2) pre and posttesting (Table 1.4) of project students on the social development section of the Manual for the Assessment of a "Deaf-Blind" Multiply Handicapped Child (Fall '80, Fall '81, and Spring '82); (3) eight project students in three project schools (four at Kainalu, two at Kaimuki, and two at Jarrett) were observed for up to four dyads of Teacher-SPED child and REG child-SPED child from November, 1981 to May, 1982 using the Social Interactions Observation System (SIOS); and (4) 6 students (four at Kainalu and two at Jarrett) were continued to be observed using the SIOS through May, 1983 with periodic observation of an additional 10 students (at Kainalu) from November, 1982 to May, 1983. Evaluation results on Teacher-SPED and Peer-SPED dyads observed using the SIOS are detailed in Chapter 5.

Social skills curriculum for severely handicapped students

One of the major products of the Hawaii Integration Project is the development of a social interaction curriculum for severely handicapped students. The final product which was a culmination of activities, field-testing and learning through observations of interactions between severely handicapped and nonhandicapped peers in public school settings is the Social Skills Curricular Strategy for Students with Severe Disabilities. Chapter 4 provides an overview of the Social Skills Curricular Strategy and the curriculum is included in this report under separate cover.

Goal #2: Training of school and community constituents for integration.

The development, training, field-testing and dissemination of training components directed to general education teaching staff;

TABLE 1.4

Number and Type of Children
Receiving Direct Services (N = 53)[a]

School	Child ID#	Sex	Age	Diagnosis	TARC[b] Score			Manual[c] Score	
					Fall 80	Fall 81	Sp 82	Fall 81	Sp 82
KAINALU	01	F	11	Severely Mentally Retarded/Autistic	99	128	122	74	58
	02	F	12	Severely Multiply Handicapped	147	146	140	85	88
	03	M	13	Severely Multiply Handicapped	124	126	117	46	74
	04	F	10	Severely Multiply Handicapped	137	137		79	
	05	M	9	Moderately Mentally Retarded/ Seizure Disorder	129	128	99	33	35
	08	F	10	Severely Multiply Handicapped	120	126	126	77	79
	09	F	14	Severely Mentally Retarded	93	126	114	76	50
	11	M	6	Severely Multiply Handicapped	86	99	95	76	79
	12	F	7	Severely Multiply Handicapped	67	74	73	50	51
	13	F	9	Severely Multiply Handicapped	38	38	37	23	21
	14	F	6	Severely Multiply Handicapped	49	49	67	28	41
	16	F	10	Severely Multiply Handicapped	38	38	39	19	20
	17	F	12	Severely Multiply Handicapped	131	140	161	90	91
	18	M	19	Severely Multiply Handicapped	95	92	101	57	72
	20	F	8	Severely Multiply Handicapped	105	105	96	60	50
	21	F	14	Severely Mentally Retarded	68	58	68	18	26
	23	M	7	Severely Multiply Handicapped	103	105	116	40	55
	24	M	13	Severely Mentally Retarded	57	57	84	54	39
	25	F	9	Severely Multiply Handicapped	62	62	66	35	48
	26	F	12	Severely Multiply Handicapped	70	70	66	40	40
	28	F	10	Severely Multiply Handicapped	43	43	66	30	31
	67	F	12	Severely Multiply Handicapped	95	95	93	54	62
	68	F	10	Severely Multiply Handicapped		39	43	32	28

TABLE 1.4(Cont.)

School	Child ID#	Sex	Age	Diagnosis	TARC[b] Score			Manual[c] Score	
					Fall 80	Fall 81	Sp 82	Fall 81	Sp 82
JARRETT	29	M	13	Severely Multiply Handicapped		59	59	65	44
	30	M	18	Severely Multiply Handicapped		88	113	75	68
	31	F	15	Severely Multiply Handicapped		49	101	65	60
	69	F	17	Severely Multiply Handicapped		49	45	19	21
	70	M	14	Severely Multiply Handicapped		45	67	45	34
KAIMUKI	41	M	17	Profoundly Mentally Retarded	113	113	120	40	25
	42	M	20	Severely Mentally Retarded	93	93	85	44	56
	43	F	19	Severely Mentally Retarded		135	141	73	50
	46	F	20	Severely Mentally Retarded	122	124	134	69	70
	49	M	17	Severely Mentally Retarded	135	145	127	47	45
	50	F	19	Severely Mentally Retarded/Autistic	136	143	126	49	40
	51	M	20	Severely Mentally Retarded	100	100	111	36	63
	52	M	17	Severely Mentally Retarded	127	127	108	58	58
	54	M	19	Severely Mentally Retarded/Autistic	103	142	116	56	55
	71	F		Profoundly Mentally Retarded		90		30	
	06	F	16	Severely Mentally Retarded	139	144	129	67	65
DESILVA	56	F	7	Severely Multiply Handicapped	113	121	125	73	77
	57	F	10	Severely Multiply Handicapped	63	47	60	26	33
	58	M	6	Severely Multiply Handicapped	91	97	108	63	67
	59	M	8	Severely Multiply Handicapped	80	69	106	31	38
	61	M	4	Severely Multiply Handicapped	76	84	104	39	51
	72	M	3	Severely Multiply Handicapped		32	37	18	24
	73	F	3	Severely Multiply Handicapped		49	54	25	27
	74	F	3	Severely Multiply Handicapped		68	52	33	39

TABLE 14(Cont.)

School	Child ID#	Sex	Age	Diagnosis	TARC[b] Score			Manual[c] Score	
					Fall 80	Fall 81	Sp 82	Fall 81	Sp 82
WAIMEA	63	M	9	Severely Multiply Handicapped	76	71	79	53	53
	65	F	4	Severely Multiply Handicapped	69	83	86	35	30
	66	F	7	Severely Multiply Handicapped	121	130	143	83	76
	75	M	3	Severely Multiply Handicapped		39	48	19	20
	76	F	3	Severely Multiply Handicapped		51	63	35	26
	77	M	3	Severely Multiply Handicapped		53	65	33	32

[a]These children and youth are receiving free and appropriate education services in various self-contained special education classrooms at the five public school project schools in the Honolulu, Windward Oahu and Hawaii School Districts.

[b]The TARC has been standardized on severely handicapped children for CA 3-16 age range, with a score range of 0-194, and is included as a gross estimate of overall functioning level for sample comparison purposes. Scores are those obtained in Fall 1981.

[c]The social development section of the Manual for the Assessment of a Deaf-Blind Multiply Handicapped Child was administered to all project youngsters. The Manual is normed on a deaf-blind population, with a raw score range of 15-91 on the social development section.

Table 1.4 con't

Number and Type of Children
Receiving Direct Services (N = 24)[a]
Replication Site - Kentucky

School	Child IDH	Sex	Age	Diagnosis	Fall, 1982 TARC[b] Score	Fall, 1982 Manual[c] Score
Kammerer Junior High	01	M	13	SPH[d]/ Autistic	118	60
	02	F	13	SPH	92	58
	03	M	14	SPH	50	28
	04	F	14	SPH	48	33
	05	M	14	SPH	128	68
Bruce Middle Junior High	06	M	11	SPH/Visually Impaired	55	27
	07	F	12	SPH/Visually Impaired	60	30
	08	M	14	SPH	47	25
Waggener High School	09	F	17	SPH	37	20
	10	N	18	SPH/Blind	125	63
	11	M	18	SPH	40	25
Minors Lane Elementary	12	F	4	SPH	120	78
	13	F	5	SPH	151	86
	14	F	5	SPH	59	45
	15	F	5	SPH	108	62
	16	F	7	SPH	70	43
	17	M	8	SPH/Visually Impaired	45	27
	18	F	9	SPH	75	52

Table 1.4 con't

(Continued)

School	Child IDH	Sex	Age	Diagnosis	Fall, 1982 TARC Score	Fall, 1982 Manual Score
Lowe Elementary	19	M	7	SPH/Blind	40	10
	20	N	7	SPH/Visually Impaired	72	60
	21	F	7	SPH	140	65
	22	F	9	SPH	85	70
	23	M	10	SPH	94	68
	24	F	10	SPH	60	63

[a]These children and youth are receiving free and appropriate educational services in various self-contained special education classrooms at the public replication project schools in Louisville, Kentucky.

[b]The TARC has been standardized on severely handicapped children for CA 3-16 age ranges with a score range of 0-194, and is included as a gross estimate of overall functioning level for sample comparison purposes.

[c]The social development section of the Manual for the Assessment of a Deaf Blind Multiply Handicapped Child was administered to all replication project youngsters. The Manual is normed on a deaf-blind population, with a raw score range of 15-91 on the social development section.

[d]SPH = Severely profoundly handicapped.

administrators at the school, district and state levels, the various constituents of the community, and the parents of severely handicapped children have been a major objective of the Hawaii Integration Project. Major activities and products during the three year project are: (1) completion of The Smallest Minority: Adapted Regular Education Social Studies Curricula for Understanding and Integrating Severely Disabled Students, Lower Elementary Grades: Understanding Self and Others, Upper Elementary Grades: Understanding Prejudice, Secondary Grades: Understanding Alienation; (2) completion of the Honolulu Zoo Docent Training Manual; (3) completion of the Zoo Docent Trainer's Manual (mainland version); (4) completion of Starting A Special Friends Program in Your School (Ho'okoho Teacher Training Module); (5) The Art of Being with Others: Promoting the Acceptance of Individual Differences (Ho'okoho Teacher Training Module); (6) Improving the School Climate (Ho'okoho Teacher Training Module); (7) Advocating for the Integration of the Severely Handicapped (Ho'okoho Teacher Training Module); (8) Integrated Recreational Activities for Disabled and Nondisabled Peers; (9) Special Alternatives Game; (10) The Mystery Game; (11) Interactive Activities Questionnaire; (12) SIOS Observer Training Manual; (13) SIOS Computer Programs; (14) SIOS Computer Program User's Manual; (15) Integrated Community Slide Show: "Segregation: A Real Handicap"; (16) Special Friends Coloring Book; (17) The 2001: A SPED Odyssey Conference Proceedings; (18) Making Friends: A Guide for Integrating Nondisabled and Disabled Preschoolers; (19) Speakers Directory: A resource of people in the community who are willing to share with students about individual disabilities; and (20) Environmental Access Survey (Appendix B).

Presentations have included (1) participation and presentation at PDAS social curriculum share session at the University of North Carolina, 1981; (2) presentations to all project schools regarding project activities in October, 1980 and September, 1981 with summary presentations at the end of each school year; (3) various public relations activities throughout the State (1980-1983); (4) a television appearance on an hour "Dialogue" program regarding integration of physically disabled children; (5) participation in State of Hawaii Department of Education "A Workshop for Parents of Moderately and Severely Handicapped"; (6) hosting the 2001: A SPED Odyssey Conference on the Education of Severely Handicapped; (7) presentations at TASH (October, 1981 and October, 1982); (8) presentation at and co-sponsoring a conference on educational concerns of severely handicapped students with Hawaii Department of Education's Exceptional Children's Section, University of Hawaii's Department of Special Education, and the Hawaii Department of Health, School Health Services Branch; (9) a presentation at the International Council for Exceptional Children Conference in Detroit, April, 1983; (10) a presentation at the 6th International Congress of the International Association for the Scientific Study of Mental Deficiency, Toronto, August, 1982; (11) presentations on integration issues with Hawaii Jaycees, the YWCA, Commission on the Handicapped, Parent Teacher State Association, Parks and Recreation, the Bishop Museum, Zoo Docents, Honolulu City Council (Welcome Fawcett's Office) and Architecture Bureau; and (12) presentations to Hawaii's school superintendents and principals. Detailed descriptions of these presentations as well as numerous others have appeared in previous HIP progress reports.

Goal #3: Preparation of nonhandicapped peers for the integration of and interaction with severely handicapped children.

A significant component of the Hawaii Integration Project has been the actual interaction activities regularly and systematically scheduled between severely handicapped children and their regular education peers. This component is referred to specifically as Special Friends. The Special Friends Program has two major goals: (1) to develop positive, mutually rewarding personal relationships between severely handicapped and non-handicapped children which will generalize to non-school environments and maintain over time; and (2) to support the development of social competence by both severely handicapped and nonhandicapped children, such that they acquire the social performance skills to successfully function in integrated comunity environments. In order to accomplish these two goals, our focus is upon personalized interactions between children as the context for the development of social interaction skills. An overview of the Special Friends Program is in Chapter 2. The Special Friends Program: A Trainer's Manual for Integrated School Settings (Revised Edition), a major product of this project, is included under separate cover.

Special Friends in project schools

The following outline of activities briefly describe the sequence of steps followed in project schools implementing the Special Friends Program:

1. The Acceptance Survey was administered to all regular education children whose parents consented;
2. A slide show ("Won't You Come and Be My Friend") was adapted for each school setting which includes pictures of handicapped and nonhandicapped children who were actually pupils at that school and shown to regular eeucation students (chronological age peers) by the HIP Program Trainer.
3. The Program Trainer scheduled a room by room sign-up to enlist volunteers to participate as regular education Special Friends.
4. Two volunteers were selected to play/interact with each of the severely handicapped Special Friends (at separate times rather than simultaneously).
5. The Program Trainer conducted an orientation for the volunteers. This was followed by a week of individual meetings between the two sets of Special Friends and friends were matched.
6. The Special Friends meeting lasted for a minimum of eight weeks and then new volunteers were selected to participate.
7. Group discussions/activity sessions (at least one weekly) were scheduled by the Program Trainer for all regular education Special Friends.
8. At the end of the school year, the Acceptance Scale was administered to the children who took the pretest (including the regular education Special Friends).

Evaluation of the Special Friends Program for regular education participants

The Acceptance Scale was administered by trained testors. Pre and posttests were given at five project (1980-1981 and 1981-1982) and five non-project comparison schools (1981-1982) on Oahu and Hawaii. Trained testors administered the Self-Observation Scale pre- and posttest to approximately 600 children (K-9) at four project schools. A Friendship Survey was completed by teachers of regular education project children at four project schools. And, finally, teachers completed the Inferred Self-Concept Scale pre- and posttest for approximately 100 nonhandicapped participants and, for comparison purposes, nonparticipants.

In addition, the Acceptance Scale was administered to project regular education children at four schools (2 elementary and 2 intermediate) on the mainland during the 1982-1983 school year. A description of test measurements used and research findings are detailed in Chapter 5 of this report.

Cooperative activities with state and local agencies

Considering the project's goals focused on the integration of severely handicapped children into school/community settings, a primary need for developing cooperative activities with state and local agencies was paramount. The HIP Staff was successful in developing many beneficial working relationships with other groups and agencies that have resulted in greater integration of severely handicapped children/youth in schools and community settings. The major activities accomplished during the three year project are: (1) completion of the Zoo Docent Trainer's Manual in cooperation with the educational staff at the Honolulu Zoo; (2) co-sponsoring of a workshop in March, 1981, on educational concerns of severely handicapped students with the Hawaii Department of Education's Exceptional Children's Section, University of Hawaii's Department of Special Education, and Hawaii Department of Health, School Health Services Branch; (3) extensive work with integrating severely disabled children in public library programs with the state and local librarians; (4) development of an integrated after-school program with parents and Project REACH; (5) a working relationship with the State Specialist in Social Studies Curriculum in the Hawaii Department of Education which resulted in the adoption of HIP social studies materials into the state social studies manual; (6) cooperative work with the Commission on the Handicapped; (7) extensive work with the Easter Seals Society Summer Program which was integrated due to HIP staff support; (8) cooperative work with Parks and Recreations Summer Program to establish integrated programs; (9) cooperative work with Project Ho'okoho, a state-wide peer-teacher inservice training project; and (10) extensive cooperative activities with agencies on the island of Hawaii including the Girl Scouts of America, Hilo Chapter, the Hilo Day Activity Center, the Hawaii County Community Mental Health Center, Hawaii Association for Retarded Citizens, the Big Island Center for Independent Living, the Department of Education, the Pacific Basin Consortium on school/community issues relating to the integration of

severely handicapped children/youth.

A detailed description of these working relationship goals and outcomes and numerous other agency relationships have been detailed in all previous HIP Progress Reports (1980-1983).

CHAPTER 2

Special Friends Program

A major goal of the Hawaii Integration Project was to describe and develop those parameters of realistic and mutually beneficial and rewarding peer interaction patterns between severely handicapped and nonhandicapped children/youth which can endure and generalize to other appropriate situations outside of and beyond the intervention setting. The result of HIP's efforts to meet this goal is The Special Friends Program: A Trainer's Manual for Integrated School Settings (Revised Edition). The intent of the Special Friends Program is to provide a transitionary training program to prepare the children--both severely handicapped and nonhandicapped--for social interactions with one another. The focus of the activities and program components contained in Special Friends is upon children, rather than parents, administrators, teachers or other school personnel. There can be no doubt that these adults could and have benefitted from the various training activities and experiences to prepare them for integration experiences. However, the opportunity presented by a generation of children attending school together for the first time and throughout the school year seemed a high priority for our efforts. Thus, we entered into these activities for the children themselves to facilitate their adjustment to and enjoyment of one another's presence in the school community.

Additionally, we felt that since we ourselves had grown up in segregated environments--"protected" from the presence of severely handicapped peers (as well as various other racial and cultural differences) --the program had to be based upon what we learned from the children involved in the interactions, not upon what we thought we already knew. We avoided currently available models for interactions between handicapped and nonhandicapped children--such as peer tutoring and volunteer programs and programs which provided nonhandicapped children with a great deal of information about handicapping conditions. It seemed to us that the purpose of association with nonhandicapped persons ought to be the social opportunities available from those interactions. The Special Friends Program provides a context for these social interactions to occur naturally between the children in natural contexts such as recess and leisure activities.

Though our original intent was to focus upon the children, some preparation of school personnel is also needed. The adults in the school community can facilitate children's interactions, or they can prevent them from occurring or insure that such experiences are temporary rather than having lasting impact upon the children involved. Thus, this revised version of the Special Friends manual now contains material which is oriented to providing teachers and other school personnel with guidelines for effecting successful integration opportunities throughout the school day. Ultimately, the true test of integration will be not the presence of a program such as Special Friends, but evidence that individual severely handicapped children can access the full range of integration experiences, within the context of their educational needs, which are available to children who are not handicapped.

Special Friends: Philosophy and Purpose

The Special Friends Program has two major goals: (1) to develop positive, mutually rewarding personal relationships between severely handicapped and nonhandicapped children which will generalize to non-school environments and maintain over time; and (2) to support the development of social competence by both severely handicapped and non-handicapped children, such that they acquire the social performance skills to successfully function in integrated community environments. In order to accomplish these two goals, our focus is upon personalized interactions between the children as the context for the development of social interaction skills. Most intervention programs which have been available have consisted primarily of two types: (1) providing nonhandicapped children with a great deal of information about handicapping conditions; and (2) utilizing nonhandicapped children as tutors or helpers in programs for severely handicapped children. The Special Friends Program does neither of these, and in fact considers both the "information" and the "helper" approaches to be potentially counterproductive to the development of positive integration attitudes and opportunities.

We feel that nonhandicapped children in particular are more likely to become accepting and tolerant of their severely handicapped peers if they: (1) come to appreciate severely handicapped children as peers, (i.e., as other persons more like themselves than different, and who thus deserve the same opportunities, considerations and affections as do "normal" individuals); and (2) feel comfortable around their severely handicapped peers because they have acquired the social and communication skills necessary to engage in a meaningful and enjoyable interchange with one another. We do not feel that children will become increasingly accepting of one another as a function of learning definitions of handicapping conditions, diagnostic criteria (mental retardation vs. mental illness, etc.) or other such facts. On the contrary, a specific question about cerebral palsy might well be meaningful only with reference to a given severely handicapped peer after a nonhandicapped child has learned how to play and communicate with Johnny who happens to have cerebral palsy. Most special educators choose their profession not out of fascination for medical and diagnostic information about disabilities, but rather because they enjoy teaching severely handicapped children. Why, then, would we suppose that nonhandicapped children need to learn definitions rather than specific interaction skills, and why do we even assume that the most interesting thing about Johnny--to a nonhandicapped child or anyone else--is his medical diagnosis or his disability? Thus, the program begins by providing the children with a minimum of general information, while instead providing children with specific information they need to interact with another child. Strategies to present necessary information (and even suggested answers to, in our experience, the most frequently asked questions) are provided as in integral part of a program which emphasizes the personal and friendship nature of the interaction between two children.

Preparing for Interactions

We do believe, however, that nonhandicapped children as well as severely handicapped children need assistance in learning how to interact with one another. The issue is not simply reassuring a nonhandicapped child so that fears and uncertainties might be alleviated by philosophical lectures (or discussions) about acceptance, expressions of feeling, etc. Our approach to teaching nonhandicapped children how to interact with severely handicapped peers allows for the expressions of their concerns through such discussions, but the major emphasis is upon skill-development. We assume that since the severely handicapped child's behavioral repertoire is probably quite unlike that of a nonhandicapped child with whom children usually play, they quite honestly do not know how to play, communicate and interact with a severely handicapped peer. What nonhandicapped children will need in order to interact with Johnny--who is severely handicapped--is far closer to social skill instruction than it is to information. They will need to learn the specific communication, social and play strategies which will be functional in interactions with Johnny, just as Johnny is learning to expand those strategies he may already have. Initially, then, the nonhandicapped child is provided with specific information relative to a selected severely handicapped peer so that interaction can begin.

These interactions between a nonhandicapped child and a severely handicapped child are furthermore designed to be primarily social in nature. The nonhandicapped child is not viewed as a "helper" or "tutor" for the severely handicapped child, and subtle pressures to cast the relationship in these terms must be continuously avoided. We find it difficult to imagine that nonhandicapped children could be developing respect for the rights of their severely handicapped peers if they are taught to view themselves as dispensers of time and resources to help those other children. In fact, social rejection may be supported by the continued philosophy represented by organized and personal charity "on behalf of those less fortunate than ourselves." Such an approach to the social position of severely handicapped persons justifies their exclusion from view and the community, with the exception of periodic (often only on holidays, etc.) highly publicized events which have no longitudinal or functional significance for the day-to-day existence of severely handicapped persons. Thus, all children who participate in the program--both handicapped and nonhandicapped--are referred to as "Special Friends" and there are continuous reminders throughout the program that we encourage peer interactions, not sympathy and helping. Since the temptation will be great (based upon our own years of experience), we provide some strategies to remind the trainer to avoid common pitfalls. For example, the program emphasizes social, play and leisure interchanges, and activities are designed which allow natural interactions in which both children can perform alternating responses in activities which are mutually reinforcing. If, on the other hand, the special education teacher takes advantage of the presence of a nonhandicapped fourth grader to "run a program," "take Johnny to the therapy room," help set the snack table, and even feed a severely handicapped student, the helper-

helpee line is irrevocably drawn. We also feel that to utilize nonhandicapped peers in this way is potentially exploitative (after all, they too are in school to learn) and can even be dangerous to one or both children (e.g., a nonhandicapped child should never lift, carry, feed or toilet a severely handicapped child). Similarly, end of the year awards given only to the nonhandicapped Special Friends undoes any pretense that the interaction was a friendship and not a service.

The interaction exchanges are intended to facilitate social skill development by both children. For the nonhandicapped participant, the learning will undoubtedly appear to be primarily vicarious in the sense that only initial instructions from a teacher may be required; once in the interaction situation, the natural cues, corrections and consequences occurring within the dyad often provide a nonhandicapped child with the information s/he needs to make the necessary adjustments to support the activity. For the severely handicapped participant, these dyadic interactions with a nonhandicapped peer do provide an ideal context for the development of social, communication and leisure skills. In fact, we outline procedures for planning these interaction events such that they facilitate the acquisition of individualized objectives written into the IEPs of severely handicapped pupils. However, this does not imply that the nonhandicapped child becomes a tutor who delivers structured cues and consequences in an instructional format. On the contrary, the interactions should ideally resemble what might be termed "generalizations sessions" if not natural situational variations of the real world. Specific guidelines to incorporate the interaction context into the IEP are outlined which allow these experiences to be viewed as learning situations but which nevertheless preserve their integrity as social and mutually enjoyable interchanges. The rewards for participating in the interaction must be obtained within the social exchange between the severely handicapped and nonhandicapped child. Anything which serves to interfere with or decrease these rewards, or which provides potentially competing and distracting rewards (e.g., social reinforcement from the teacher) jeopardizes the likelihood that the relationship will endure beyond the immediate situation and extend into the daily lives of both children both now and in the future.

Program Development and Field Testing

Integrated public school services in the State of Hawaii provided the context for the development and field testing of Special Friends. In the mid-1970s, the State Department of Education determined that severely handicapped children would attend school on general education compuses serving primarily regular education children. Beginning in 1977, the seven school districts established classes (generally self-contained) for severely multiply handicapped, severely to profoundly retarded, and autistic children and youth at more than four elementary and secondary schools identified throughout the state. Generally, these schools were selected because of geographical location which was most central to the homes of most severely handicapped children in that area who would attend the program, as well as for other reasons such as the

availability of space and school administrative support. However, the decision to establish the classrooms was an administrative one at the state and district levels, and overt resistance was not an issue. Mildly to moderately handicapped children had, of course, attended a continuum of educational arrangements--from self-contained classrooms to resource room and mainstream support services--on regular campuses in the educational system for many years. And it was made quite clear that the services being established for severely handicapped children were not "mainstreamed" (i.e., the children would actually be placed in regular classes for academic instruction) but would be separate classrooms. These classrooms would be considered a part of each school, however, and the general education administration holds responsibility for them just as for regular education youngsters.

The first such classroom for severely multiply handicapped children--children who are severely to profoundly retarded and additionally exhibit multiple handicapping conditions such as sensory and/or motoric impairments--was established in January 1977 at Kainalu Elementary School in Kailua, Hawaii. Almost immediately, teachers reported that many nonhandicapped children were seemingly curious about the classroom, the equipment and the students. These first children gathered about during their recess periods, and eventually began spending time in the special education class--asking to play with the children, push the wheelchairs, etc. The continuing daily visits and the concern of the special education teachers (there were two classes by fall 1977), who were not quite sure what to do with the situation, prompted a parent of a nonhandicapped student and the principal of Kainalu to jointly plan Hawaii's first Special Friends Programs, which began during the 1977-1978 school year.

During the spring semester 1978, this parent conducted the initial pilot of the activities reported here as a VISTA worker. When the VISTA funds lapsed at the end of the academic year, the Department of Special Education at the University of Hawaii was able to secure a CETA Title VI Special Projects grant to staff and evaluate an expanded Special Friends program at Kainalu Elementary and Kailua Intermediate Schools and to support a totally teacher-run replication program at Honowai Elementary School in Waipahu, Hawaii. In addition to orientation activities directed to all the regular education students at each school, the program consisted of scheduled opportunities for interaction between a self-selected group of regular education children from grades 4 through 7 and their severely handicapped age-peers. Each nonhandicapped child spent weekly recess periods with a chosen Special Friend, and an additional recess period once a week with the program trainer at each school. The nature of the one to one interactions between children was structured by each special education teacher, and included a wide variety of activities. The group discussions included initial pilots of activities since expanded and becoming the core of the Special Friends sessions described in this manual. The results of this full year of development and field testing indicated increasingly positive attitudes toward their handicapped peers as a function of the amount of contact experienced by nonhandicapped youngsters (Voeltz, 1980, 1982).

During the 1979-1980 academic year, Special Friends continued at the elementary level through local school efforts with no outside funds and primarily moral and evaluation support only from the University of Hawaii. In 1980, federal funding was obtained to support the continued development of the integration model; referred to locally as the Hawaii Integration Project, school and community based activities were conducted beginning in the 1980-1981 academic year through the present in nearly a dozen public school settings. Table 1 listed each school setting which has been involved as either a primary or replication site throughout the field-testing of various components. For each school, we have indicated the types of handicapped and nonhandicapped children involved, how many children participated in the activities, and indicated the degree of school involvement. As can be seen from the table, the model has been field-tested with hundreds of severely handicapped and nonhandicapped children in Hawaii and mainland schools and has functioned both with full project support as well as only the provision of evaluation and consultative services by project staff. Nonhandicapped children from grades kindergarten through nine have participated in various program components, and severely handicapped children from ages 3 through 18 diagnosed as severely to profoundly retarded, deaf-blind, severely multiply handicapped, moderately retarded and autistic have been thus "integrated" into general education campuses. Effects of the Special Friends Program intervention are detailed in Chapter 5--Formative and Summative Evaluation.

Organization of the Manual

The manual is designed to provide teachers, administrators, counselors, parents or any other interested persons with the information and guidelines necessary to successfully implement the Special Friends Program. It is assumed, of course, that the information and guidelines will be expanded and adjusted by the individual school trainer to fit not only the unique abilities and needs of the children involved, but also any environmental features which might be unique to a given school or community.

The chapters are organized according to the major steps and decisions the trainer must make in implementing this program. Chapter 1 provides the background and philosophy of integrated services and the Special Friends Program in particular. Chapter 2 provides a step-by-step summary of procedures to initiate the program in your school. Chapter 3 contains the core program sessions for the regular education sessions conducted with small groups of those nonhandicapped children who participate in Special Friends. In addition to the core sessions which are considered to be essential to the program, we have provided a number of additional session descriptions which have also been field tested and can be added to the general program. These various sessions are differentiated for lower elementary, upper elementary and secondary age use. Chapter 4 provides an overview of a social performance goal structure which provides a framework to plan appropriate social skill objectives for severely handicapped pupils based upon the demands of persons, places, relationships, and other cues present in eight situation types. This assessment and curriculum model emphasizes selecting maximally powerful response

variations across a sample of the eight situation types, and guidelines are provided to assist teachers in coordinating and evaluating the individualized objectives within the context of interactions with nonhandicapped peers. Chapter 5 contains a selection of interaction activities, indicating guidelines for selection of activities based upon age level, the needs of both regular education and special education students, environmental factors, etc., as well as suggestions of dyadic and small group activities which have proved particularly successful in project efforts. Chapter 6 summarizes a number of program evaluation issues, and discusses the kinds of evaluation which the classroom teacher can realistically do by him or herself to determine the effects of the program and whether changes might be needed. References are provided, and various appendices include resource listings, sample consent forms, samples of typical questions children ask as well as answers which can be given, and summaries of available reports on various integration activities. The Special Friends Program: A Trainer's Manual for Integrated School Settings (Revised Edition) is included with this report under separate cover.

CHAPTER 3

Training of School and Community Constituents for Integration

The development of training methods and materials to prepare educators, administrators, state and community agency staff, parents, and nonhandicapped students to include severely handicapped students in integrated activities was a major goal of the Hawaii Integration Project. During the first year, target groups were identified and a systematic procedure for affecting each group was identified and field tested. Modifications and further field testing was made during the last two years and inservice products were finalized. (See Evaluation, Chapter 5, Question for detailed evaluation data. A common characteristic of our target groups, including administrators, teachers, students (nonhandicapped), parents, and state and community agency staff, is each person expressed an overload of work to accomplish in their role with little opportunity to add another program or activity to their professional and/or personal lives. For these reasons, the Hawaii Integration Project chose to approach inservice training adhering to the principle of integrative--not additive--procedures to facilitate the integration of severely handicapped children into schools, activities and within the community (Hemphill, 1981). An additive procedure is one which requires an addition to events and programs already occurring within the school and/or community. A two-hour inservice training session offered to teachers on a non-school day on a voluntary basis is a typical example of an additive activity. Integrative procedures are those which expand upon events already occurring within the school or community, and require identification of existing programs and events as well as adaptations and expansions of those existing events. Thus, an existing unit of "understanding others" in the second grade social studies curriculum could be expanded to include references to persons with disabilities as part of the "other" group. The integrative procedure was used, therefore, to systematically develop training which would assist teachers, students, parents, administrators and community persons in integrating severely disabled children within school and community programs as a natural part of their role.

Professional Educators and Regular Education Students in School Community

Existing programs offered to regular education students and taught by regular education teachers revealed many possible opportunities for incorporating information and activities to facilitate positive attitudes and learning about severely disabled students (Hemphill, 1981). Initial investigation of regular education curriculum in the Hawaii public school system revealed numerous integration information opportunities (Voeltz, 1982) which involved either correcting negative images and sterotypes or integrating more information and process activities into already existing curriculum units. Our strategy was to establish priority changes identified in existing curriculum materials based upon the district's timetable for curriculum revisions (e.g., adding person's with disabilities to the groups identified as "minorities" in the social studies guidelines for Hawaii teachers). Key personnel throughout the system who are responsible for product revisions or input on product revisions were contacted and prepared changes in units. Materials or definitions were written and sub-

mitted for review. In general, our strategy was to build upon existing objectives, activities, goals, and materials, rather than adding isolated material or programs to current practices or policies of the Hawaii State School District.

More specifically, HIP staff began investigating regular education curriculum in Hawaii by reviewing the core set of Foundation Program Objectives (FPOs) developed by Hawaii School Districts. The Foundation Program Objectives are essentially goal statements for the development and implementation of regular education curriculum. Each FPO is broken down into behaviorally defined Performance Expectations (PEs) and responsibility for each of the PEs is assigned throughout specific grade levels and subject matter within grade levels from kindergarten through grade twelve. The FPOs were analyzed and outcomes which were supportive of information and ideas inherent in promoting the integration of severely disabled students were selected for in depth review. Three of Hawaii's eight Foundation Program Objectives were explored for integration information opportunities: (1) develop positive self-concept; (2) develop decision-making and problem-solving skills; and (3) develop a continually growing philosophy that reflects responsibility to self as well as to others. Major responsibility for instructional programming of these FPOs was assigned to social studies and guidance-counseling curricula at each grade level. The next step was to identify specific performance expectations at each grade level within the social studies and guidance and counseling curricula which were most compatible to the infusion of information and activities which support the integration of severely disabled students. At the Kindergarten through third grade level, several units in the social studies and guidance and counseling curricula focused on the PE that the student "describes and accepts ways in which people are alike and different" (under the FPO regarding positive self-concept). At the fourth through sixth grade level, several units focused on the PE that the student "learns how to get along with others" (with a specific unit on prejudice) which is under the FPOs regarding decision-making and problem-solving skills and responsibility to self as well as to others. And at the intermediate and secondary level units which dealt with alienation also fell under the FPOs regarding decision-making and problem-solving skills and responsiblity to self as well as others. Thus, these units were identified as the target units in which HIP staff developed supplemental activity units to include compatible ideas which promote the integration of severely disabled students.

Prior to the development of the supplemental materials for each of the generalized three grade levels (K-3; 4-6, and secondary), the staff identified four parameters which were to serve as guides in the development of curriculum options. The four parameters were: (1) the existing curriculum was not to be reworked so that the major focus shifted to disabled persons. Rather, ideas in the curriculum were expanded to include references to individuals with disabilities; (2) personalized and process activities were preferable to information-oriented and lecture activities. In addition, modification of curriculum units must include and/or enhance interactions between children in regular education

and special education classes; (3) the activities developed should be presented and analyzed with reference to real situations and people at that school, and not to disabled persons in general; and (4) curricular changes must be written and designed to be nonjudgemental. Learning about oneself and others is an internalizing process that should allow the individual to make all critical value judgements.

The products developed using the integrative approach to inservice training were The Smallest Minority: Adapted Regular Education Social Studies Curricula for Understanding and Integrating Severely Disabled Students and include: (1) lower elementary grades: Understanding Self and Others; (2) upper elementary grades: Understanding Prejudice; and (3) secondary grades: Understanding Alienation. The three curricula are included under separate cover. The curricula were field tested in project schools and found to be compatible with existing units covering the performance expectations, were easy to use, were compatible with resource materials (Houghton-Mifflin Social Studies Series) used in teaching social studies, promoted a better understanding of self and others (which included disabled students) and provided enjoyable integrated learning experiences for students in regular education and special education (severely disabled) classes. The curricula were also seen as a complimentary series of activities to exisiting social studies units and not as additive material to content which must be covered during the school year. Reviewer critiques are in Appendix B.

A fourth product, the Special Alternatives Game, was developed from this process and addressed the FPO regarding decision-making and problem-solving skills. The Special Alternatives game (appropriate to grades 4-12) was designed so that children generated unique solutions to eleven different problem categories. The eleven problem categories included problems which implied exclusion of disabled children, either physical, programmatic and attitudinal exclusion, from events and places within the school community. The activity instructs both through the process by which students participate and through the content itself. The Special Alternatives game was an effective way to begin to analyze a specific school in order to find solutions to situations which may be hindering the integration of severely disabled students. Again, this curriculum product did not focus solely on integration problems but included situations typical to all students in the school community. The power of this problem-solving strategy is that the individual begins to look at all situations as being solvable. Expanding an individual's process of thinking about issues of integration from a yes/no approach to what are all the possibilities prior to decision-making is extremely beneficial to integration efforts as well as to the cognitive development of each student.

Additional products which promote the integration and understanding of severely disabled students and were developed by HIP staff included: (1) The Mystery Game; (2) The Special Friends Coloring Book; (3) Integrated Recreational Activities for Disabled and Nondisabled Peers; (4) Making Friends: A Guide for Enhancing Interactions Between Disabled and Nondisabled

Preschoolers; (5) Environmental Inventory*; and (6) Speakers Directory: A Resource of people in the community who are willing to share with students about individuals with disabilities.

The integrative approach to inservice training which resulted in many products being field-tested and used in Hawaii's public school demonstrates an alternative approach to affecting changes in schools which promote the integration of disabled students. Curricula adaptations offered inservice personnel a method of infusing ideas into programs which are on-going. Once the curricula (e.g., social studies units) were accepted by State personnel who included the units in the social studies manual sent to all Hawaii social studies teachers, the curricula became a long-term part of the State educational system. These curricula, hence, may continue to support integration efforts long after the HIP ends. This integrative approach to training offers a more cost effective method to training teachers, administrators and students than traditional inservice training which focuses on one-shot full or half-day classes for teachers.

Dissemination of HIP products has been extensive and intensive in Hawaii Public Schools, the mainland and in foreign countries. Dissemination figures are specified in detail in Chapter 6. In addition to HIP dissemination efforts, four products have been accepted by LINC and are in various stages of the LINC marketing process. These products are the Special Friends Program: A Trainer's Manual for Integrated School Settings (Revised Edition) and all three levels of the adapted Regular Education Social Studies Curriculum.

Dissemination efforts have also included research papers published in major journals and presentation at local, state, national and international conferences. Requests for HIP materials (see Dissemination, Chapter 6) reflect a significant response to these dissemination efforts.

Training of Community Constituents for Integration

The integrative approach to inservice training was also applied to the process of selecting constituents in the community who would have the greatest impact on integration efforts. An analysis of programs in the community which offer programs to children and which have not been integrated was made and an indepth exploration of the programs offered through the public library system and public programs, particularly the Honolulu Zoo, was commenced.

The public library system is a branch of the Department of Education in the State of Hawaii. There are state and district level administators and local public librarians who are part of the library system. Initial contacts were made with the state level administrators in charge of programs and materials used in the public library. Discussions revealed a sensitivity to and understanding of the importance of books which depict the disabled person in a positive and realistic perspective. Implementation of how to order appropriate books which met this criteria

* see Appendix B

and actual ordering of books concerned with disabled persons had already been well established in Hawaii's public library system. However, close examination of the library's after school and summer reading programs (e.g., readings by librarians, puppets, and movies) revealed that the participants in these programs were nondisabled children. While the librarians (local level) expressed the desire to provide programs to integrated groups of children, disabled children rarely participated in these programs.

Further examination of these library programs indicated that advertising efforts on the part of the librarians did not reach the disabled population. The main advertising approach used by librarians is to visit schools within their locale and talk to each classroom about the after-school and summer programs. However, librarians stated they were never directed to the special education classes by the local school personnel (e.g., secretary, principal, counselor) who manage outside speakers. Through this process of exploration with HIP staff, the librarians decided that in the future they would ask to speak to all special education classes in each school, too. Other advertising efforts to reach disabled and nondisabled children were also explored.

In Spring, 1981, the HIP staff initiated a series of meetings with Ms. Mindy Opsahl, Education Director of the Honolulu Zoo. Up to this time when the zoo provided zoo tours for school children and youth, disabled and nondisabled students always participated in separate groups. The zoo staff had not considered integrating the two groups prior to our meetings with them.

However, our meetings with Ms. Opsahl and her staff resulted in a consensus that integrated groups would perhaps have a potential for enhancing zoo experiences for both disabled and nondisabled students. Again, the first step in exploring the integration approach was to examine current practices by the zoo for advertising and scheduling groups of students to visit the zoo. The Teacher's Guidebook is a booklet routinely sent to Hawaii teachers who request a zoo tour and program for their students. The group decided that parts of this guidebook should be rewritten to emphasize zoo experiences for integrated groups and to encourage participating schools to plan trips to the zoo as integrated activities. Scheduling modifications were also made to pair groups of students whenever possible.

This process led the group to the realization that zoo docents, both adult and student volunteers, would now need additional training in order to provide a quality zoo experience for the expected integrated groups. Thus, The Zoo Docent Trainer's Manual: Enhancing Integrated Zoo Experiences for Disabled and Nondisabled Children/Youth was developed to provide that training. Again, the philosophy of the training was to assist zoo docents to feel comfortable with integrated groups by helping them to expand what they were doing to better accommodate for the needs of the group. In addition, docents learned and generated alternative ways to increase socialization between the nondisabled and disabled students and with the

docents. The training program was field-tested with two separate groups of zoo docents, one group of adult volunteers and one group of high school student volunteers. Both groups had positive responses to the training and comments included: (1) "It's amazing how many solutions were generated by people who thought they knew nothing about working with children in an integrated situation;" and (2) "These materials provide a good foundation for building communication skills to meet a variety of learning situations at the zoo. It is especially effective with the participation of professional resource people from the community." The availability of the Zoo Docent Training Manual in national and international advertising efforts has been at the 70% level after one months notification. The manual materials were developed so that, with minor modifications, they could be used for training docents in non-zoo settings as well (e.g., aquariums, art museums, etc.). Details on dissemination efforts are in Chapter 6 for the Zoo Manual.

Training of Parents for Integration

During the Spring of 1981, parents whose children were severely disabled and attending one of the five project schools were invited to be involved with a parent group. Initial meetings between parents and project staff revealed a mutual interest and commitment to the integration of their children in school and community activities. A problem-solving strategy resulted in a list of parent concerns which had some relationship to integration issues. The list of concerns was prioritized and the concern with the highest priority was availability of summer programs for their children. After brainstorming the priority problem, the parents decided to identify all summer programs, write a description of each program and distribute the descriptions to parents through the Department of Education in Hawaii. This process of compiling information and identifying integrated and segregated summer programs was a learning process for all involved. Parents all agreed that finding integrated programs for their children was an extremely important consideration. However, the parents expressed more concern for finding quality programs for their children and felt the number of quality programs to be lacking. The parents updated the summer program description, again, for the summer of 1982.

Through this summer program process, a few parents became involved with HIP staff and the Director of the REACH Project, a project concerned with recreational programs, to work together to develop an afterschool program at one of the project schools for regular and special education students. The afterschool program was planned to follow the philosophy of the Special Friends Program whereby children with individual differences played together in mutually enjoyable and beneficial activities. The program started in January, 1982, and continued through May, 1982. While providing integrated/recreational programs for severely disabled and nondisabled children, the program also served as a model and reinforcement of a community's commitment to the integration of all children. While the program did not continue during the next school year, the expectations of parents concerning integrated programs was greatly increased.

CHAPTER 4

Social Skills Curricular Strategy for Students with Severe Disabilities

The Social Skills Curriculum component and skill sequence designed for use by special education professionals in education addressed to severely handicapped children's affective/social interaction needs is a major product of the Hawaii Integration Project. The implementation of the Special Friends Program in project schools, identification of social skills objectives for project children, evaluation activities and observations of social interactions between severely handicapped and nonhandicapped peers have offered the HIP staff a comprehensive base of experiences from which to develop a social skills curriculum for severely handicapped children.

Rationale for Teaching Severely Disabled Students Social Skills

Among the domains of instruction for disabled students, social skills is perhaps the most critical domain. Data indicate that social skills can significantly predict the restrictiveness of placement from early childhood through adulthood. Maladaptive social behaviors, such as aggression, noncompliance, or self-injurious behavior are clearly associated with institutionalization. Schalock, Harper, and Genung (1981) find that poor social skills are a major reason for referrals for institutionalization. On the other hand, appropriate social behaviors significantly correlate with professional team decisions in selecting institutionalized individuals for community placement (Vitello, Atthowe, & Cadwell, 1983). In studies investigating institutionalization (Crawford, Aiello, & Thompson, 1979; Gollay, 1976; Gottesfeld, 1977; Heal, Sigelman, & Switzky, 1978; Intagliata & Willer, 1982; Jacobson & Schwartz, 1983; Keys, Boroskin, & Ross, 1973; Moen, Bogen, & Aanes, 1974; Pagel & Whitling, 1978; Schalock et al., 1981; Sutter, Mayeda, Call, Yanagi, & Lee, 1980), the necessity of appropriate social skills for successful and maintained community placement are identified repeatedly and consistently.

Studying the factors associated with successful regular kindergarten placement of disabled students, Vincent, Salisbury, Walter, Brown, Gruenwald, & Powers find that social skills (e.g., following group instruction, waiting for a turn, working independently), rather than specific task skills (e.g., counting, identifying alphabet letters, fine-motor skills), were the "survival skills" predictive of kindergarten success. Likewise, vocational survival skills for adolescent and adults with disabilities are primarily social rather than task-related skills (Johnson & Mithaug, 1978; Mithaug & Hagmeier, 1978; Niziol & DeBlassie, 1972; Rusch, 1979). These preschool and vocational studies, in conjunction with the institutionalization research, indicate that the most important skills for success in a community are social in nature. It is, therefore, imperative that a valid curriculum for severely disabled students include training socially appropriate behaviors.

Overview of the Social Skills Curricular Strategy for Severely Disabled Students

This Social Skills Curricular Strategy for Students with Severe Disabilities has been developed from the programs initiated and sponsored by the Hawaii Integration Project, a three-year project funded by the U.S. Department of Education, Office of Special Education. The programs have primarily focused on the interactions between severely disabled students and nondisabled students during informal free (leisure) time in several of Hawaii's elementary and secondary public schools. The major goals of the project have been: a) to develop the social skills of both severely disabled and nondisabled children so that they can function in integrated school and community environments; b) to develop positive, mutually rewarding relationships between severely disabled and nondisabled children; and c) to develop training methods and materials to include severely disabled children in integrated activities for educators, administrators, parents, and others.

In addition to describing the Hawaii Integration Project, Chapter I of this manual presents strong reasons for teaching social skills to students with severe disabilities and the assumptions that special education teachers must hold in order to do so effectively. The concepts of social validity, integration, and independence, as they relate to social skills and severely disabled students, are explained and promoted.

Chapter II details the goal of this strategy: to comprehensively assess and program for an optimum set of social skills needed for a disabled individual to participate within roles of value and interest to him or her and society across integrated environmental settings. This approach views social competence as determined by social skills, in conjunction with task skills, that are needed to function in valued roles within an individual's community (across integrated present and future environments) and that satisfy his or her basic human needs. The Interactive Curricular Model visually explains the relationships among these factors (Figures 4.1 and 4.2).

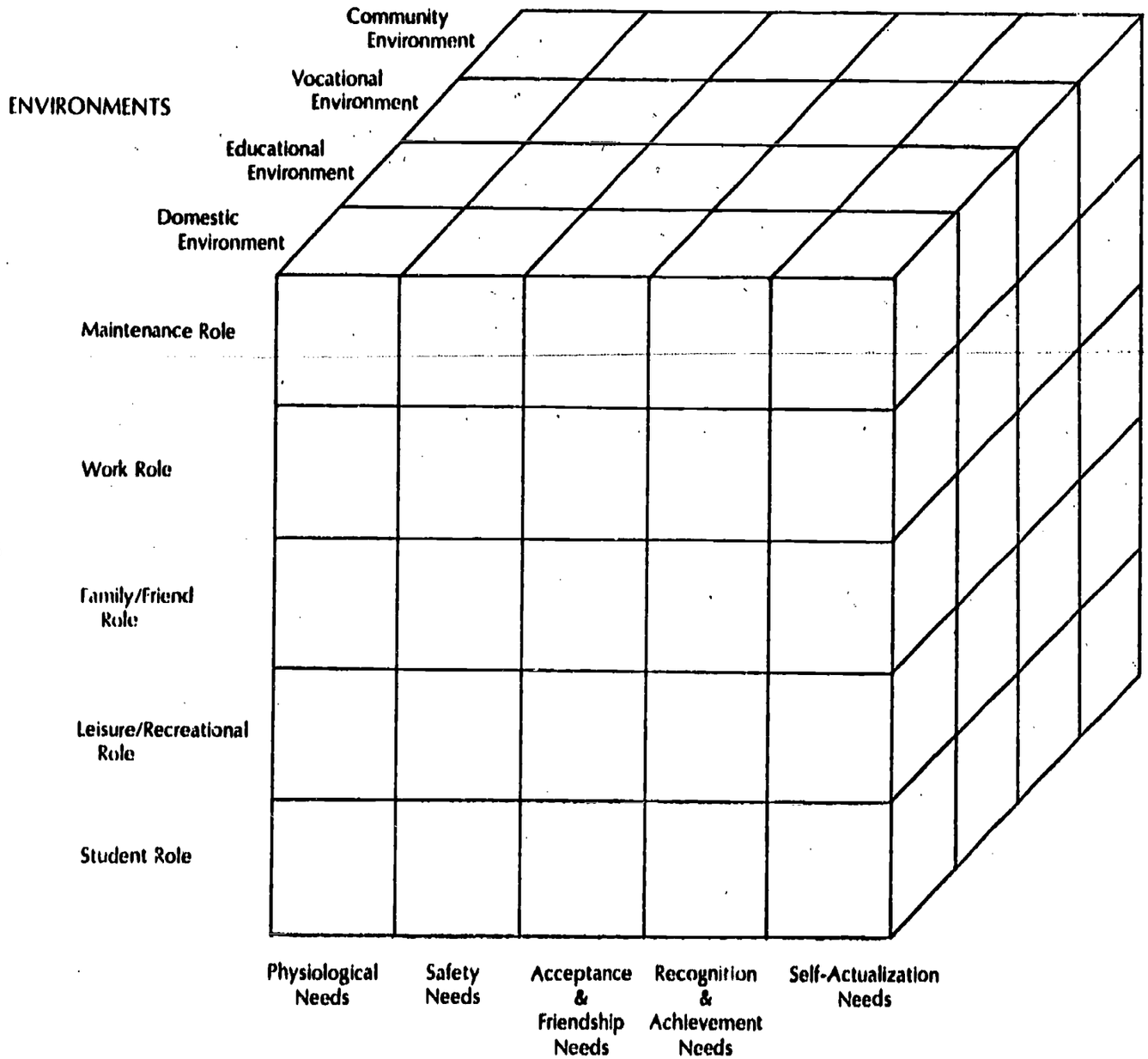
Chapter III outlines the process of assessing the social skills which a specific student needs to learn:

1. the identification of the roles and environments desired and valued by the disabled student, his or her parents/guardians, teacher, educational agency representative, and society;
2. the observation of the student's present routines and activities;
3. a discrepancy analysis between what is desired and what is occurring;
4. the selection of the critical routines and activities;
5. the examination of the social skills embedded in these critical routines and activities to identify appropriate objectives for instruction.

The last chapter, Chapter IV, touches upon instructional strategies useful in teaching social skills. Instructional objectives, curriculum

Figure 4.1

Interactive Curricular Model for Life Planning

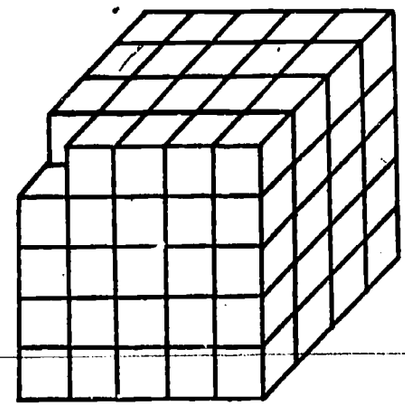


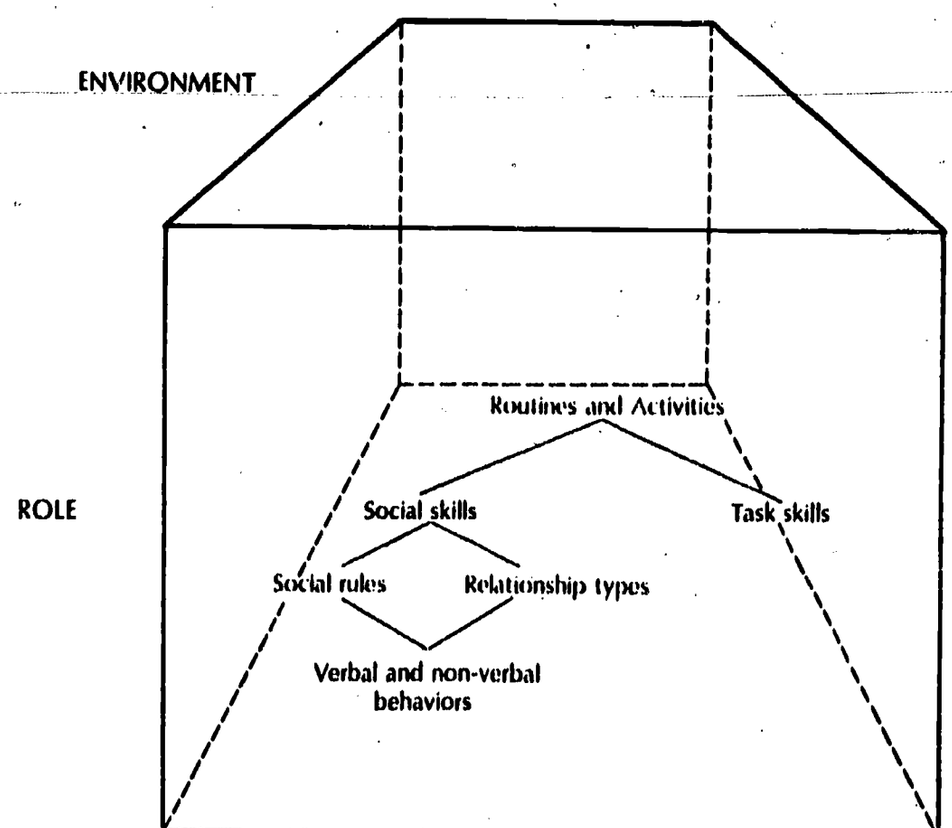
Hemphill, Noonan, and Levy; 1983

Figure 4.2

HAWAII INTEGRATION PROJECT

Interactive Components of Curricular Model





Hemphill, Noonan, and Levy; 1983

sequencing (based on the Individualized Curriculum Sequence), and instructional programs (subdivided into antecedent, response, and consequence components) are discussed. In the appendices that follow are blank forms which teachers may reproduce for use in their classrooms, more HIP data on social interactions and skills of severely disabled students, and journal articles about the project. The Social Skills Curricular Strategy for Students with Severe Disabilities is under separate cover with this report.

CHAPTER 5

Formative and Summative Evaluation Data

Multiple measures and strategies have been utilized during the three project years (1980-1983) to obtain information regarding the effects of interactions between nonhandicapped children and severely handicapped peers. This section provides a report of the formative and summative evaluation design submitted with the Second Progress Report, May, 1981 (see especially Tables 1 and 2 in the Evaluation Design, Appendix A). All evaluation instruments (Table 5.1) were submitted in previous reports (see, Second Progress Report, May, 1981, and the appendix of Annual Report, 1980-1981) and published instruments were described rather than copied due to copyright restriction. Copies of the Acceptance Scale (copyright held by Dr. Luanna Voeltz, with permission for use in the project data collection and reporting), the Social Interaction Observation System (SIOS), the Friendship Survey, the Access Survey and the Interactive Activities Questionnaire are in Appendix .

Formative Evaluation:

Analysis of Project Accomplishments and Supportive Evaluation Data

(1) *Are there identifiable characteristics of those nonhandicapped students who interact most frequently with severely handicapped students?*

Acceptance Scale

The Acceptance Scale (Voeltz, 1981), a measure of children's attitudes toward their handicapped peers, has been used with elementary and secondary students in Hawaii schools from 1977 to 1982 in several studies (Voeltz, 1980, 1982 and Hemphill, 1982) to determine differences in attitudes of children who did or did not participate in the Special Friends Program in schools in which a classroom(s) for severely handicapped was located.

Nonhandicapped students who chose to participate in the Special Friends Component obtain significantly higher scores on the Acceptance Scale (Voeltz, 1980, 1982). Of those children who initially interact as part of program activities, there is a significant though modest correlation between the percentage of visits actually made over a period of four months and the attitude measure score (Voeltz, 1982), suggesting either these children are more committed to their interactions with severely handicapped peers or that the interactions led to progressively more positive attitudes.

Results of the data collected during the 1981-1982 school year with three elementary and two intermediate project schools and four elementary and three secondary control schools continued to substantiate previous findings (Tables 5.2, 5.3, 5.4, 5.5, 5.6).

Nonhandicapped students at Kainalu have been involved in the Special Friends program since 1977 (Table 5.7). Each year the Acceptance Scale was

TABLE 5.1

Instrument Development and Implementation

Variable[a]	Instrument/s[b]	Schedule
Social and affective gains by handicapped children	IEP Pupil Progress on Objectives;	Continuous
	Social Interaction Observation System individual targets	Pilot Phase I; primary sites Phase II; replication Phase III
	Social Development scale score on Michigan assessment (Collins & Rudolph, 1975)	
	TARC overall score	
Behaviors of handicapped/nonhandicapped children during interactions	Social Interaction Observation System (Voeltz, Kishi & Brennan, 1981)--all variables	Pilot Phase I; primary sites Phase II; replication Phase III
Attitudes of nonhandicapped children toward handicaps	Acceptance Scale (Voeltz, 1980)	Pilot and revisions, Phase I; all sites Phases II-III
Characteristics of nonhandicapped children: self-concept, peer & school affiliation (self-rating)	Self Observation Scales (Stenner & Katzenmeyer, 1979)	Primary sites Phase II; replication Phase III
Characteristics of nonhandicapped children: self-concept (teaching ratings)	Inferred Self-Concept Scale (McDaniel, 1973)	Primary sites Phase II; replication Phase III
Perceptions of friendships with handicapped by nonhandicapped children	Friendship Survey Interview (Voeltz et al., 1981)	Pilot Phase I; Primary sites Phase II; replication Phase III

TABLE 5.1 (cont'd)

Teacher attitudes toward interactions and integration	HIP Inservice Training Measure/s	Phase II
	HIP Formative evaluation teacher/ aide surveys	Continuous
	ETS Program Options Questionnaire (Brinker et al., 1981)	Pending final revisions and ETS permission, pre/post Phase II primary sites; replication Phase III
	Mainstreaming Opinionnaire (Pedhazur-Schmelkin, 1979)	If adaptable for severe, primary sites Phase II
Parent perceptions of program and integration	Parent Interview (telephone)	June 1981, June-July 1982 primary sites; replication Phase III
Perceptions of Hawaii integration history (1976-present as seen by key persons in decisions/ advocacy)	Oral Interview/History (two-stage) [c]	Phase II
Integration Access for handicapped children	Access Survey/s (Hemphill et al., 1981)	Pilot Phase I; primary sites Phase II; replication Phase III

[a]Note that some instruments will measure more than one variable. In most cases, both descriptive information and changes in a particular variable as a function of integration will be evaluated.

[b]If more than one instrument is listed, a combination instrument may be utilized, pending final revision information from authors and final formulation of our instruments based upon the analysis of the pilot, Phase I data.

[c]See Appendix B, letter to Dr. Luanna Voeltz

Table 5.2

Acceptance Scale Scores in Project and Control Schools, Grades K-2

Scale Measure	Test Date	Project $\bar{X}$ (n = 221)	Control $\bar{X}$ (n = 510)	Analysis of Covariance F: Post-test Dependent Variable	P
Total Scale	Pre-Test	19.7	17.3	42.36	.0001
	Post-Test	20.8	17.8		
Social Contact Willingness As a Factor[a]	Pre-Test	10.9	8.6	61.34	.0001
	Post-Test	11.5	8.8		
Teasing Factor[b]	Pre-Test	5.0	4.7	.60	ns
	Post-Test	4.4	4.4		

[a]Consists of items 1, 4, 5, 7-8, 11, 16-17.

[b]Consists of items 3, 10, 18.

Table 5.3

Acceptance Scale Scores in Project and Control Schools, Grades 3-6

Scale Measure	Test Date	Project $\bar{X}$ (n = 391)	Control $\bar{X}$ (n = 920)	Analysis of Covariance F: Post-Test Dependent Variable F	P
Total Scale	Pre-Test	26.6	24.4	34.78	.0001
	Post-Test	27.7	26.5		
Social Contact Willingness as a Factor[a]	Pre-Test	19.55	18.35	13.55	.001
	Post-Test	19.29	19.86		
Actual Contact Handicapped Factor[b]	Pre-Test	6.64	4.61	21.46	.0001
	Post-Test	7.41	5.55		
Teasing Factor[c]	Pre-Test	3.83	3.84	18.41	.0001
	Post-Test	4.70	4.22		
Deviance Consequence Exclusion Factor[d]	Pre-Test	7.00	6.79	.31	ns
	Post-Test	7.14	7.00		

[a]Consists if items 3, 6, 12, 16-17, 19-20, 22, 29, 31-34.

[b]Consists of items 2, 5, 7, 23, 26-27.

[c]Consists if items 8, 14, 25, 28.

[d]Consists of items 4, 9, 11, 15, 18, 24, 30.

Table 5.4

Acceptance Scale Scores in Project and Control Schools, Grades 7-9

Scale Measure	Test Date	Project $\bar{X}$ (n = 191)	Control $\bar{X}$ (n = 156)	Analysis of Covariance F: Post-Test Dependent Variable F	P
Total Scale	Pre-Test	40.91	40.05	1.02	ns
	Post-Test	40.22	39.31		
Social Contact Willingness Factor[a]	Pre-Test	17.55	18.04	3.33	ns
	Post-Test	16.51	17.47		
Actual Contact Physically Handicapped Factor[b]	Pre-Test	6.78	5.42	1.92	ns
	Post-Test	7.14	5.84		
Actual Contact Mental Retardation Factor[c]	Pre-Test	3.76	2.49	1.93	ns
	Post-Test	3.82	2.86		

[a]Consists of items 1, 6, 15-17, 20-21, 23, 32, 33, 35, 37.

[b]Consists of items 2, 5, 11, 14, 18, 22, 24.

[c]Consists of items 7, 19, 24, 28.

Table 5.5

Total Acceptance Scale Mean Scores
by Schools (Project vs. Control),
Elementary Level

School	Grades	N	Total Scale Means	
			Pre-Test $\bar{X}$	Post-Test $\bar{X}$
Project:				
Kainalu	K-2	73	19.3	19.5
	3-6	173	27.6	28.0
DeSilva	K-2	148	19.9	21.5
	3-5	218	25.8	27.5
Waimea	K-2	116	17.3	19.9
	3-6	258	27.7	30.4
Control:				
Liliuokalani	K-2	50	15.0	15.4
	3-6	72	22.5	24.6
Kohala	K-2	94	17.7	18.4
	3-6	170	23.4	25.7
Kaewai	K-2	100	17.9	16.0
	3-6	163	21.4	22.6
Hilo	K-2	150	17.6	17.9
	3-6	258	24.1	26.7

Table 5.6

Total Acceptance Scale Mean Scores
by Schools (Project vs. Control),
Secondary Level

School	Grades	N	Total Scale Means	
			Pre-Test $\bar{X}$	Post-Test $\bar{X}$
Project:				
Jarrett	7-9	72	45.8	43.9
Kaimuki	7-9	119	37.9	38.0
Control:				
Stevenson	7-9	104	38.3	37.3
Kohala	7-9	52	43.5	43.3

TABLE 5.7

Special Friends Field Test School Sites

Description of School[a]	Site[b]	Participant Children				Year(s) Involved
		Handicapped		Nonhandicapped		
		Diagnoses[c]	Ages	n[d]	Grades	n[d]	
PSE (Kainalu)	Primary	SMH, TMR	3-19		K-6		1977-1982
PSE (DeSilva)	Primary	SMH, Deaf-Blind	3-11		K-6		1980-1982
PSE (Waimea)	Primary	SMH, Deaf	2-9		K-6		1980-1982
PSE (Honowai)	Replication	SMH, SMR, PMR, TMR	4-20		4-5		1978-1982
PSE (Kailua)	Primary	TMR	13-16		7		1978-1979
PSS (Kaimuki)	Primary	SMR, PMR, Autistic	16-20		7-9		1980-1982
PSS (Jarrett)	Primary	SMH	13-18		7-9		1981-1982
PSE (Waikiki)	Replication	Autistic	6-9		4-		1980-1981
PSE (Pearl City)	Replication	TMR	7-11		5-6		1981-1982
PSE (Pearl Harbor Kai)	Replication	TMR	6-14		4		1981-1982
PSE (Barber's Point)	Replication	SMH, TMR, Autistic	3-12		5-6, 3-4		1981-1982
PSE (Jefferson)	Primary	SMH	6-9		1-3		1980-1981
PSE (Aliiolani)	Replication	SMH	6-13		4		1981-1982
PSE (Wilcox, Kauai)	Replication	SMH	4-16		4		1981-1982

[a]PSE = Public School Elementary; PSS = Public School Secondary (intermediate). All are general education campuses.

[b]Primary = Project staff participated directly in program; Replication = Project staff provided only consultation and evaluation support.

[c]SMH = Severely Multiply Handicapped; SMR = Severely Mentally Retarded; PMR = Profoundly Mentally Retarded; TMR = Moderately (Trainable) Mentally Retarded.

[d]These numbers are exact for handicapped participants and estimates for nonhandicapped participants.

administered, nonhandicapped students obtained higher scores than the previous year. The nonhandicapped students who participated in the Special Friends program obtained significantly higher scores than nonparticipants during each year, too. This is also descriptive of schools involved in the project for two and three years (as submitted in previous progress reports).

During the 1982-1983 school year, the Special Friends Program was replicated in five schools (two elementary, two intermediate and one high school) in the Jefferson County Public Schools, Louisville, Kentucky. Prior to the initiation of the Special Friends Program, nonhandicapped students were administered the Acceptance Scale and in Spring, 1983, the posttest. Posttest data was not collected for Waggener due to changes in the school testing policy and posttest data at Bruce Midder was lost in a fire that destroyed the severely handicapped classroom during the last week of school. The Special Friends component was replicated identically to Hawaii schools in Minors Lane and Kammerer. At both Minors Lane and Kammerer, it was the first year of the severely handicapped class to be in that school. At Lowe Elementary, the teacher (severely handicapped class) did not replicate the Special Friends Program as planned, and instead implemented a buddy system in which nonhandicapped students taught the severely handicapped students instructional programs (peer tutoring or teacher-student relationship). While this was not a planned change, it gave us the opportunity to observe attitudinal changes of students who participated in a peer tutoring program in comparison to the mutually rewarding friendship program (Special Friends Program). Nonhandicapped students in schools in which the Special Friends Component was replicated obtained significantly higher scores on the Acceptance Scale while students who participated in the Buddy System obtained significantly lower scores (Tables 5.8, 5.9).

The Self-Esteem and Social Confidence Ratings

The Self Observation Scales (SOS) (Stenner and Katzemeyer, 1979) was administered in the fall (1981 pretest) and spring (1982 posttest) to determine whether participation in the Special Friends program and interactions with severely handicapped peers might have some impact upon children's self-esteem and social confidence. Both project and control regular education children in grades 3-9 completed the scales. Tables 5.10 and 5.11 summarize these results for those children in grades 3-9 who completed the rating on both test dates. At the elementary level, only two comparisons revealed significant differences. Project children rated themselves significantly lower than did nonparticipant children at pretest on the Peer Affiliation Scale ($t = 2.41$, 171 df, $p < .05$), and project children showed a significant increase at posttest on this dimension ($t = -2.42$, 82 df, $p < .05$). At the secondary level, the only difference which was significant was the decrease, for project children, on the Teacher Affiliation Scale ($t = 2.12$, 56 df, $p < .05$).

The Inferred Self-Concept Scale, a teacher rating scale on the characteristics of the nonhandicapped child's self-concept, was given to teachers

TABLE 5.8

Total Acceptance Scale Mean Scores by Schools (Replication Schools) Pre-Post Gains

Replication School	Grades	N Pre	N Post	Total Scale Means Pre-Test x	Post-Test x	T	df	ps
Minors Lane Elementary	K-2	196	182	19.05	21.38	4.7	376.0	< .0001
Minors Lane Elementary	3-6	65	73	22.86	26.01	3.5	136.0	< .0006
Kammerer Secondary	7-9	168	40	27.14	29.70	2.5	206.0	< .01
Lowe[1] Elementary	3-6	59	53	23.32	17.28	-7.5	81.7	< .0001

[1] Lowe Elementary did not replicate the Special Friends Program. The intervention program was a peer-tutoring program. Details of this intervention are in question 1.

Table 5.9

Total Acceptance Scale Mean Scores by Schools Comparing Pre and Post-Test Gains for Special Friends and Control Group

Replication Schools	Grades	N Special Friends/Control	Total Scale Means Pre-Test Special Friends	Pre-Test Control/Special Friends	Post-Test Control	F	df	ps
Minors Lane Elementary[1]	K-2							
Minors Lane Elementary	3-6	23 83	23.1	22.8	28.5 20.2	32.76	4	6.01
Kammerer[2]								
Lowe Elementary[3]								

1 All the children in K-2 participated as regular education special friends during the school year.

2 Data for this school was reanalyzed and not available for this printing.

3 All the children in 3-6 participated as "buddies" (peer-tutors) during the school year.

Table 5.10

Pretest and posttest Self Observation Scales dimension ratings by Special Friends Program participants and nonparticipants, Grades 3-6.

SOS Dimension		Nonparticipants (n=131)		Participants (n=42)	
		Mean	SD	Mean	SD
Self Acceptance	Pre	55.49	6.61	52.98	7.18
	Post	55.32	6.80	55.41	5.15
Self Security	Pre	52.02	8.82	48.57	8.62
	Post	51.95	9.28	50.54	8.08
Social Maturity	Pre	51.14	7.62	49.36	9.30
	Post	52.91	5.69	51.85	6.22
Social Confidence	Pre	55.55	7.23	52.67	9.48
	Post	56.80	6.38	54.86	7.40
School Affiliation	Pre	56.26	8.22	55.12	8.68
	Post	54.86	8.55	54.96	9.16
Teacher Affiliation	Pre	54.48	6.11	50.90	9.11
	Post	54.84	6.97	51.91	8.12
Peer Affiliation	Pre	53.71	7.80	50.28	8.76
	Post	54.18	7.83	54.20	5.80

Table 5.11

Pretest and posttest Self Observation Scales dimension ratings by Special Friends Program participants and nonparticipants, Grades 7-9.

SOS Dimension		Nonparticipants (n=74)		Participants (n=29)	
		Mean	SD	Mean	SD
Self Acceptance	Pre	48.63	9.80	48.32	10.04
	Post	48.73	9.30	49.09	8.66
Self Security	Pre	48.33	8.42	49.41	9.37
	Post	48.97	9.36	47.52	8.44
Social Confidence	Pre	51.51	9.44	48.45	9.31
	Post	53.26	8.38	49.04	9.49
Self Assessment	Pre	50.30	9.87	51.57	10.77
	Post	49.15	9.83	52.70	9.63
Peer Affiliation	Pre	49.14	9.96	49.83	9.03
	Post	49.95	9.09	50.79	8.91
Teacher Affiliation	Pre	53.69	8.24	53.00	7.83
	Post	52.67	9.30	48.21	9.28
School Affiliation	Pre	53.92	9.18	51.79	8.77
	Post	51.00	10.30	48.63	11.13

with project children in their classes. Evaluation of data revealed no additional findings related to the self-concepts of project children.

The Friendship Survey[1]

The intention of the Special Friends Program is to foster mutually beneficial social relationships between nonhandicapped and severely handicapped children. Yet, the nonhandicapped children might nevertheless perceive these interactions as helping situations, and not heterogeneous friendships. In order to investigate their perceptions of the relationship, each program participant was asked to answer three questions (see Tables 5.12, 5.13, 5.14) with respect to his/her Special Friend, Best Friend, and the person at home who fulfilled the caregiver-nurturance role for that child (most often the mother, but including other persons such as the father, an older sibling, and other relatives and friends; we determined this information in advance of the survey for each child, and checked on the validity of our information by asking "Who takes care of you at home?" when the survey was completed). The three questions were completed for each role one at a time, presented in random order.

As can be seen from the tables, there were significant differences in children's responses for the different relationships. As might be expected, children were more likely to say they liked their mother because she performed nurturance functions for them; they almost never responded with this category for the Special Friend. A small percentage (8%) indicated that they liked their Special Friend because they played a nurturant role for that person. Although the "Appealing" category response is reminiscent of the positive stereotype of mentally retarded persons, this was also a frequent category selected for the Best Friend. Approximately one-third of the children indicated that they liked both their Best and Special Friends for "socialibility" reasons, while children were far less likely to give this reason for their mother (see Table 5.12).

When asked to identify a favorite activity with each person, children were more likely to pick a "helping" activity for both their mother and their Special Friend in comparison to their Best Friend; the most frequently identified category across all three relationships was cooperative play or a joint activity of some sort (see Table 5.13). When asked to provide an adjective describing how they felt in the presence of each person (see Table 5.14), 17% of the nonhandicapped children expressed some degree of increased self-esteem with respect to their Special Friend; this was almost never mentioned with respect to a Best Friend or Mom (4% and 3%, respectively).

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[1]The section on The Friendship Survey and Tables was written by Dr. Luanna Voeltz and Dr. Jerry Brennan, Analysis of interactions between nonhandicapped and severely handicapped peers using multiple measures. A paper presented at the 6th International Congress of the International Association for the Scientific Study of Mental Deficiency (IASSMD), Toronto, August, 1982.

Table 5. Relationship function categories listed by children grades 1-9 (n = 149) for best friend, caregiver and special friend

Item response to "I like ____ because:"	Relationship[a]					
	Best friend[b]		Mom[c]		Special Friend[d]	
	n	%	n	%	n	%
Submissive-Nuturance: helps me, likes me, is nice to me, cares for me	37	25	79	53	6	4
Dominance-Nuturance: help him, do something for him	1	1	2	1	12	8
Appealing: is good person, nice person, personal qualities, etc.	43	29	25	17	58	39
Sociable: interactions, fun to be with, enjoy him, good friend	51	34	11	8	44	30
Other: lives by my house, doesn't spank me	12	8	24	16	23	15
Blank-no response	5	3	8	5	6	4

[a]Test of two way association $x^2 = 124.89, 10$ df, $p < .0001$; approximate proportion association $r^2 = .22$.

[b]Interrater Kappa = .96 (n = 149; 2 raters).

[c]Interrater Kappa = .91 (n = 149; 2 raters).

[d]Interrater Kappa = .83 (n = 149; 2 raters).

Table 5.13

Table 6. Activity type listed by children grades 1-9 (n = 149) for best friend, caregiver and special friend

Item response to "If I could pick anything I wanted, my favorite thing to do with _____ would be :"	Relationship[a]					
	Best friend[b]		Mom[c]		Special friend[d]	
	n	%	n	%	n	%
Parallel play: jog, ride bikes, play records	19	13	20	13	18	12
Cooperative play: play with, go places (shopping, etc.) together, (joint activities)	102	68	91	61	80	54
Interactive play: hopscoth, talking, cards, video games (turn taking)	17	11	10	7	24	16
Helping: help him, do something for him	4	3	13	9	16	11
Other: do things, hear her tell stories	4	3	11	7	8	5
Blank-no response	3	2	4	3	3	2

[a]Test of two way association x^2= 19.038, 10 df, p < .01; approximate proportion association r^2 = .04

[b]Interrater Kappa = .91 (n = 149; 2 raters).

[c]Interrater Kappa = .87 (n = 149; 2 raters).

[d]Interrater Kappa = .88 (n = 149; 2 raters).

Table 5.14

Table 7. Affect descriptor listed by children grades 1-9 (n = 149) for best friend, caregiver, and special friend

Item response to "When I am with _____, I feel:"	Relationship[a]					
	Best friend[b]		Mom[c]		Special Friend[d]	
	n	%	n	%	n	%
Positive-General: thankful, good happy, fine, ok	105	71	95	64	96	65
Positive-Self: proud, needed, good about myself, important, like older sib	6	4	5	3	25	17
Positive-Other: loved, cared for, good friend, like sibling, quality of friendship	12	8	25	17	6	4
Negative: bad, weird, mixed up, some good-some bad	6	4	7	5	8	5
Other: like talking, thoughtful, like I'm learning	15	10	12	8	9	6
Blank-no response	5	3	5	3	5	3

[a]Test of two way association X^2 = 36.73, 10 df, p < .0001; approximate proportion association r^2 = .08.

[b]Interrater Kappa = .88 (n = 149; 2 raters).

[c]Interrater Kappa = .86 (n = 149; 2 raters).

[d]Interrater Kappa = .89 (n = 149; 2 raters).

Responses in the Positive-General (e.g., "I feel good") category were both the most frequent and quite similar across the three relationships; responses in the Negative (e.g., "I feel weird") category occurred infrequently and again at a similar frequency for the three relationships.

Anecdotal information indicates that most of the children who participate in the interactions with their handicapped peers are "average;" however, our own observations and those of the teachers in project schools also indicate that two groups of children are overrepresented in our activities--gifted children and children who are considered to be discipline problems in regular education. A majority of the children at Jefferson School who volunteered for the slide show were in a special remedial program, and a majority of the teenagers who regularly participated in the interaction activities at Kaimuki Intermediate School were in special programs, including living in a residential program through court assignment. At DeSilva, the teachers said the children were the well adjusted leader types or those who have no other friends. At Waimea, children who participated were also described as assertive and some as very shy. At Jarrett Intermediate, the teacher stated that 7th graders appeared more inclined to be special friends. When the students became 8th graders, they seemed to have a different attitude about themselves and wanted to do other things. A disproportionate number of children at all the sites were considered to be gifted by their teachers, and, in fact, had been so identified in school programs serving this population. In conjunction with these observations, teachers suggested in survey responses that participation in Special Friends is beneficial to the regular education children's self-concept, peer interactions, etc

(2) *Are there identifiable characteristics of school staff who interact most frequently with severely handicapped students or their classrooms?*

Teachers and school staff who interact most frequently with severely handicapped students tend to include: (1) those who have an established rapport with the teacher of the severely handicapped student; (2) those who are in closer proximity to the severely handicapped classroom or frequently pass by the classroom (classroom located in major traffic flow areas in the building); (3) those who have schedules similar or identical to the SMH class (same recess period, lunch period, etc.) and have activities in shared spaces (recess on the same playground); (4) staff who have flexible schedules and are more mobile (support personnel, janitor, counselor); and (5) teachers whose children participated in the Special Friends Program. The key element to increased interaction tends to be whether the SVH teacher has a relationship with the other teacher or staff member. In schools where special and regular education teachers have separate staff meetings or serve on departmentalized committees, there is less of a chance for regular and special education teachers to develop a relationship and usually there are less frequent shared activities between classes. Similarly, access to the library, cafeteria, and other school programs appears to be a function of interactions between the principal, the staff in those locations, and the special education professional/

paraprofessional staff. Special education teachers report that the regular edcuation teachers who interact directly with the severely handicapped students are most positive to the program; they are described as "very cooperative", flexible" and "concerned about the program and child progress."

The school's "support staff" appear on the whole to interact more often with the special education classes and students than the regular education teachers, e.g., the school librarian, the school counselor, the office staff, janitorial and cafeteria staff and school nurse or health attendant all appear to have become involved with the severely handicapped students. At each of the project schools, the principals made regular visits to the classrooms both to observe project activities but also--more often--simply to look in, greet the severely handicapped students and generally be available much as they would do for their regular education classes.

SVH teachers seem to assume the role of initiating activities between classes. The exception to this was project regular education teachers who used the HIP Social Studies Curriculum. Built into the curriculum were structured interactions between regular and SMH classes.

One of the major evaluation efforts during the 1981-1982 project year was to evaluate regular education teacher willingness to promote integrated activities between severely handicapped and nonhandicapped peers. The Integrative Activities Questionnaire (IA Questionnaire, submitted in a previous progress report), a measure of teacher willingness to promote integrated activities, was filled out by 93 regular education teachers (50 elementary and 43 secondary) in project schools and by 80 regular education teachers (53 elementary and 27 secondary) in the control schools (Tables 5.15 and 5.16). Overall, all the regular education teachers who completed the questionnaire indicated a positive willingness to promote integrated activities (Table 5.17). At the elementary level, only one item from the IA Questionnaire was rated significantly higher in the project school than the control school. The item related to a teacher's willingness to supervise recess when students in regular and severely handicapped classes played together. This is not surprising, since the Special Friends program emphasizes recess as a time for social interactions to occur, and teachers at the project school had more opportunity to observe or supervise integrated playground experiences. At the secondary level, only one item from the IA Questionnaire was rated significantly higher in the control school than in the project school. The item related to a teacher's willingness to allow students to participate in small group education activities with severely handicapped peers, provided their own work was completed. Despite the fact that not all the control schools presently have severely handicapped classes on their campuses, it is revealing that regular education teachers are willing to promote integrated activities between severely handicapped and nonhandicapped peers.

Evaluation efforts also included looking at the extent that project teachers participated in HIP inservice activities, as measured by the HIP

Table 5.15

Summary of Response Rates Per School

Name of School	Grade	Number of Surveys Sent	Number of Surveys Returned	Response Rate
Project School				
A	Elementary	35	20	57%
B	Elementary	15	15	100%
C	Elementary	16	15	94%
Subtotal	Elementary	64	50	78%
D	Secondary	29	13	45%
E	Secondary	45	30	67%
Subtotal	Secondary	74	43	58%
TOTAL	Elem./Second.	138	93	67%
Control School				
F	Elementary	25	25	100%
G	Elementary	9	6	67%
H	Elementary	17	13	76%
I	Elementary	12	9	75%
Subtotal	Elementary	59	53	90%
J	Secondary	17	17	100%
K	Secondary	36	10	28%
Subtotal	Secondary	53	27	51%
TOTAL	Elem./Second.	112	80	71%

Table 5.16

Demographic Information Regarding
Project and Control Groups

Name of School	No. of Reg.Ed. Teachers	No. of Spec.Ed. Teachers	School Setting	Grade Level
Project Schools:				
Kainalu	35	10	Large Suburban	Elementary
DeSilva	13	2	Small Suburban	Elementary
Waimea	16	1	Rural	Elementary
Subtotal	64	13		
Jarrett	29	2	Urban	Secondary
Kaimuki	45	8	Urban	Secondary
Subtotal	74	10		
TOTAL	138	23		
Control Schools:				
Hilo Union	21	0	Urban	Elementary
Liliuokalani	9	0	Large Suburban	Elementary
Kaewai	17	2	Small Suburban	Elementary
Kohala	12	0	Rural	Elementary
Subtotal	59	2		
Kohala	17	0	Rural	Secondary
Stevenson	36	0	Urban	Secondary
Subtotal	53	0		
TOTAL	112	2		

Table 5.17

IA Questionnaire Percentage
Scores in Project and Control Schools
for Elementary Schools

Scale Measure	Project $\bar{X}$	Control $\bar{X}$	t	f
Total Mean % Score	50.1	62.9	1.77	.08

IA Questionnaire Percentage
Scores in Project and Control Schools
for Secondary Schools

Scale Measure	Project $\bar{X}$	Control $\bar{X}$	t	f
Total Mean % Score	72.93	76.07	.66	.719

Teacher Checklist (previously submitted in progress reports), with items on the IA Questionnaire (Tables 5.18 and 5.19). Results indicate that regular education project teachers prefer integrated activities that are initiated by other school personnel (librarian, regular education student PE teacher, and special education teacher) and occur outside of the regular teacher's classroom (library, playground, gym, and special education classroom). The activity that regular teachers prefer to initiate themselves and that occurs in their classroom was an art activity (a non-competitive, more fun-related activity).

Similarly, at the secondary level, regular education project teachers prefer activities that are initiated by other school personnel (counselor and special education teacher) and occur outside of the regular classroom (cafeteria, school grounds, assembly, special education class). The activity that secondary special education teachers prefer to initiate themselves involves their students interviewing severely handicapped students during their free periods (outside their classroom).

Anecdotal information from program trainers in project schools indicates that teachers and staff who interact more frequently may be concerned about special education students being teased or about the legal ramifications of P.L. 94-142, are friendly with the SVM teacher or HIP program trainer, or are philosophically in agreement with integration. Both male and female teachers and staff interact with severely handicapped students. The school's support staff appear to interact more frequently with the special education classes and students than the regular education teachers, (e.g., the school librarian, the school counselor, the music teacher, the PE teacher, and office staff, janitorial and cafeteria staff). Support personnel tend to have more flexible schedules and more opportunities to interact with the students too, (e.g., music class, lunch periods, library time).

(3) *What sort of organization, arrangements, or scheduling seems most conducive to interactions between severely handicapped and nonhandicapped students?*

One of the most crucial elements to providing interaction opportunities for severely handicapped and nonhandicapped students is scheduling. Lunch, recess, and the starting and ending time of the school day must be identical for the same-age regular education and severely handicapped children for interactions to occur. Half-hour recess periods provide a good length of time for interactions to occur. Scheduling shared recesses, lunch and other activities is easier when plans are made at the beginning of the year. Standing arrangements for interactions, (e.g., library with 2nd graders) results in consistent interactions. If teachers of severely handicapped students wait for other regular education classes to invite them to activities, it usually doesn't happen often or regularly. Generally, the principal is responsible for scheduling lunch and recess periods at the beginning of the school year. In addition, the principal also schedules or approves the schedules of the librarian, music teacher, PE teacher, inter-grade level

Table 5.18

IAQ Item Correlations
With HIP Teacher Checklist
Elementary

Item No./ IAQ Item	Item r with HIP Teacher Checklist	p
1	.0768	.3
2	.1715	.119
3	.244	.046*
4	.3137	.014*
5	.1497	.152
6	.0554	.353
7	.2116	.072
8	.3799	.004*
9	.2692	.031*
10	.0859	.279
11	.1582	.139
12	.1446	.161
13	.2104	.073
IAQ	-.1476	.156

*$p < .05$

Table 5.19

IAQ Item Correlations
With HIP Teacher Checklist
Secondary

Item No./ IAQ Item	Item r with HIP Teacher Checklist	p
1	.2667	.044*
2	.2640	.046*
3	-.0069	.483
4	-.0041	.490
5	.0077	.481
6	.1220	.221
7	.1374	.193
8	.2807	.036*
9	.2011	.101
10	.3551	.011*
IAQ	.2090	.092

*$p < .05$

activities, etc. If the principal (or those in charge of scheduling) is aware of integrating special and regular classes for activities, additional activities such as music, PE, and library time are conducive to interaction between same-age regular education and severely handicapped students. At one project intermediate school, the principal, during the 1981-1982 school year was supportive of integration, assisted the teachers and the students (severely handicapped) to have the opportunity to interact outside of the classroom. The feeling in the school was positive and supportive to integration. The following year (1982-1983), the principalship changes and a new philosophy of special education being separate from and different than regular education prevailed. As a result, no encouragement or support of social interaction among students or teachers was offered and morale was negatively affected.

Shared playgrounds and outdoor "organized" games during recess seem particularly conducive to interactions between regular education and severely handicapped students. Classroom interactions, which are arranged by the teachers involved, are ideal for interactions such as shared seasonal parties, guest performers (puppeteers), music rehearsals and performances, field trips, etc.

Planning is necessary whenever recess periods provide major interaction opportunities; it is best to establish general patterns such as meeting in front of the library or cafeteria as a group, meet in area closest to children's classrooms, etc. Informal activities are most conducive to interactions between the children themselves, where the adults may have established the context but do not intrude upon the children's play. Teachers have had to learn to "stand back" and allow (trust) the children to interact with one another naturally. The very rare problems which arose when the children were allowed to function independently (e.g., carelessness with a wheelchair) are preventable by properly preparing the children in the early stages of the program.

Ideally, a variety of interactional arrangements should be available to students in regular and special education classes. These arrangements may vary from informal activities in which interactions between the children are defined by them (free play on the playground) to more structured activities such as a joint PE class. The variability in activities and settings allows students more opportunity to learn from and with one another.

(4) *Does the relative location of severely handicapped classrooms within the school building affect interactions between special and regular education teachers? Between severely handicapped and nonhandicapped students?*

The physical arrangement of the classrooms on a general education campus can significantly affect the kinds of interactions which are possible and which occur between the teachers and the children. The five project schools offered an excellent opportunity to observe how

interaction patterns are affected by different organization arrangements, and included: (A) one SMH classroom centrally located on an intermediate campus; (B) several SMH and SMR classrooms located in a separate wing on the far side of an intermediate campus; (C) several SMH and SMR classrooms in a centrally located wing on an elementary campus; (D) two SMH classes located at the far end of an elementary campus; and (E) one SMH classroom in a separate building just off the grounds of the elementary campus. Eight students in three of the project schools (A, B, and C) were observed on two separate occasions to determine the amount of time each student spent in an integrated setting (Table 5.20). The time samples show that students in a centrally-located classroom on both the elementary and intermediate campus spend more time in integrated experiences than do students who are located in separate wings at the farthest point from the regular education classes. The time samples were repeated during Spring, 1983, (observations in categories A and C as cited above) in one of two SMH classrooms centrally located on an intermediate campus (same school as A above only a second SMH class was added) and several SMH and SMR classrooms in a centrally located wing on an elementary campus. Four students in two of the project schools were observed on two separate occasions. (Table 5.21). The centrally located classroom on the intermediate campus varied dramatically (16.5% average to 3%) from the first to second sample. While the location of the classroom did not change, the principalship did change. As described in question 3, the principal was supportive of social interactions during the 1981-1982 school year and the principal was not supportive of integration during the 1982-1983 school year.

Anecdotal information from teacher and staff reports indicates that location and numbers of the SMH classrooms on a campus also affects interactions between special and regular education teachers. On the intermediate campus with one centrally-located SMH classroom, the special education teacher reported that he regularly (not daily) had lunch and would "socialize" with regular education teachers. He also states that many joint integrated class activities occurred as a result of these interactions. At his school, there was no separation of special and regular education teachers at faculty meetings. Contrarily, at the schools where there were several SMH teachers (whether or not the classes were centrally located or isolated in a wing of the school), the special education teachers related with each other and not with the regular education teachers. Faculty meetings for both schools were also separated for regular and special education teachers. The integrated activities that the special education teachers tended to participate in were Special Friends activities and not jointly-planned activities with regular education teachers.

In addition, locating the rooms at one corner of campus can be as effective as a separate campus in terms of segregation. In fact, even labeling the special education classes in some way (e.g., a different school name or a department label) can lead to a new label in the schools; on a secondary campus where a previously self-contained special education school moved to a general education campus but retained its name, one teacher reported that regular education children had been heard to use the

Table 5.20

Percentage of Time Spent
in an Integrated Setting
(two all-day samples)

Child	School	10/81	12/81
Marty	A: Public School Intermediate Classroom	15	18
Marie	A: Public School Intermediate Classroom	5	16
Tammy	B: Public School Intermediate Wing	5	2
Mark	B: Public School Intermediate Wing	3	2
Charles	C: Public School Elementary Classrooms	5	26
Jane	C: Public School Elementary Classrooms	na	43
Karl	C: Public School Elementary Classrooms	na	20
Richard	C: Public School Elementary Classrooms	16	na
	$\bar{X}$ =	8.17	18.14

Table 5.21

Percentage of Time Spent
in an Integrated Setting
(two all-day samples)

1982-1983

Child	School	4/83	5/83
John	A: Public School Intermediate Classroom	1	5
Mary	A: Public School Intermediate Classroom	1	3
Sue	C: Public School Elementary Classroom	9	11
Fred	C: Public School Elementary Classroom	2	8
	X =	3.25	6.75

school name disparagingly--rather than a general term such as "mental"--in social insults to their peers.

Finally, locating special education classes off to one section of campus effectively removes them by considerable time and distance from age-appropriate playgrounds, cafeteria, and all other general school facilities. Given the addition of multiple handicaps which make travel even more complicated, such physical locations can result in actual segregation since the special education classes cannot negotiate the distance in the transition times allotted and, in those situations, will opt to remain "close to home". When special education classes are located on major school "pathways" (e.g., the route from the office to classrooms, from classrooms to playground), on the other hand, regular education children will naturally become involved with their handicapped peers as they pass by and gradually stop to play on a regular basis. Similarly, such physical proximity allows the teachers to interact, which frequently allows mutual classroom by classroom integrated activity plans as well as facilitating individual mainstream arrangements.

(5) *What is the most appropriate and effective form of inservice training for regular education staff and nonhandicapped students? How often should inservice sessions be conducted? Do inservice needs or priorities change over time?*

The most effective form of preparation for nonhandicapped students (the Special Friends Program) has been extensively field tested here in Hawaii; program descriptions have been provided in Voeltz, Kishi, Brown and Kube (1980) and in Voeltz (1981, 1982) (both submitted with previous reports) and in Voeltz, Hemphill, Brown, Kishi, Furehling, Klein, Levy, Collie and Kube (1983) which is included with this report.

Inservice activities used with regular education staff were derived from the Integrative Inservice Training Model (Hemphill, 1981, paper presented at TASH). Integrative inservice procedures are those which expand upon and refine events already occurring within a school community, and require identification of existing programs and events as well as adaptations and expansions of those existing events. The adapted regular education social studies curriculums (submitted in previous reports) were used by regular education teachers during social studies periods. If inservice training is appropriate and effective, one observable result would be for increased interactions between severely handicapped and non-handicapped peers. The social studies curriculum field testing, particularly by first and combination first-second regular education teachers, resulted in visits and/or planned activities with the teacher and students in the severely handicapped classes.

In addition to curriculum and game format inservice, teachers throughout project schools had the opportunity to or actually observed interactions between severely handicapped and nonhandicapped peers because of the Special Friends program. In addition, some teachers may have had students

in their class in the Special Friends program. It appears that the Special Friends program may also be an effective inservice training procedure for elementary regular education teachers. As described in question 2, the only item from the IA Questionnaire that was significantly higher in project schools than in control schools was the teacher's willingness to supervise recess when students in regular and severely handicapped classes played together.

Experience with inservice training for staff leads to the following conclusions: (1) teachers should have a range of options from which to choose that are integrative types of inservice training (e.g., Social Studies Curriculum, Special Alternatives, Mystery Game, etc.); (2) participatory training in which regular education professional staff becomes actively involved in the development of interaction activities themselves and/or interactions with the children is optimal; (3) regular education teachers are willing to promote integrative activities (see question 2), particularly those that are initiated by the special education teacher or other school personnel and that occur outside of their classroom; therefore, expanding options for integrative activities within the school is a natural inservice training method; (4) regular teachers who have a relationship with the special education teachers are much more likely to participate in integrated activities than regular education teachers who do not; (5) observing interactions between severely handicapped and nonhandicapped peers (e.g., Special Friends) has a positive effect on a teacher's willingness to promote integrative activities; and (6) close proximity to the class for severely handicapped (peers) and similar schedules (recess, lunch, beginning and end of school day) is an effective inservice method.

(6) *Which tasks or situations seem most appropriate for passive helping interaction? For more active reciprocal interactions?*

Passive-Helping Interactions. These kinds of interactions are developed when regular education peers are used as tutors in academic and basic skills programming, when they are asked to concentrate upon reinforcing appropriate behavior in their severely handicapped peers, etc. Passive helping interactions also occurred between nonhandicapped and lower functioning severely handicapped dyads whenever the object or toy being shared was not easy for the handicapped child to manipulate; when the regular education child was instructed in how to select an activity or make an activity accessible to his handicapped peer, the interaction was more reciprocal (for example, the regular education child can show a filmstrip to a special education child--passive/helping--or can assist the severely handicapped child to manipulate the frame-changing lever--reciprocal/active). Passive helping interactions seem to occur most often when the regular education child was unaware of the capabilities of their handicapped peer, and also likely to occur when two nonhandicapped children interact with one handicapped child. Finally, certain kinds of passive/helping interactions are literally not allowed in our activities (although other projects have mentioned these) such as teaching the regular education child how to lift, carry, toilet,

feed, and dress the severely handicapped child; it seems both exploitative of regular education children to use them in this way and hardly conducive to mutual respect when one peer is clearly caregiving for another.

Active-Reciprocal Interactions. More active and reciprocal interacti ns occur in dyads, small groups and large groups of handicapped-nonhandicapped children whenever care has been taken to select materials and activities which are age-appropriate and accessible (in terms of manipulation and skill level requirements) to both groups of children. The severely handicapped child can be provided with systematic instruction in play with the materials at times other than the interactions themselves so that s/he develops the necessary skills level to participate actively; given this extra exposure, s/he then participates in mutual play when interactions with nonhandicapped peers occur. In general, large active groups almost always promote more reciprocal interactions, such as outdoor sport and gross motor activities. Certain fine motor and mutual play activities which are carefully planned can also facilitate mutual, reciprocal interactions, provided that the teacher or adult moves away from the interaction and allows the children to direct the activity. Otherwise, both the nonhandicapped and especially the handicapped student (for whom nearly all social interactions up to now have involved adults, not peers) tend to direct their behavior to the adult rather than to one another; for example, we have a videotaped sample of ball play in which a severely handicapped student playing ball with a nonhandicapped peer brought the ball to the teacher rather than to his peer who actually threw the ball to him. Again, teachers and adults must learn to fade from the picture if these social interaction skills are to have an opportunity to develop.

The Social Interaction Observation System (SIOS) was used to observe handicapped-nonhandicapped peer dyads and teacher-child dyads during the 1981-1982 project year. Behavioral observations revealed that nonhandicapped peers engage in significantly more "appropriate" activity type and "parallel" activity type behavior (i.e., an activity in which the target person parallels the activity of the severely handicapped child) than teachers. Teacher-child dyads tend to be passive-helping interactions.

(7) *Do interaction skills acquired by severely handicapped children and/or youth through role playing, modeling, or other forms of simulated instruction transfer to target situations?*

Our project adheres to the principle that social interaction skills must be developed by participation in social interaction (i.e., "simulations" have limited effectiveness--if any--in teaching skills to severely handicapped students which must actually be used in natural environments in the context of natural cues and consequences. Furthermore, nearly all of the severely handicapped students in our project are lower functioning than the population with whom role playing and modeling social skills interventions have been successfully employed. Given access to actual social interactions with nonhandicapped peers and with one another, it seems unnecessary to utilize simulations and questionable instructional strategies with a population which is known to experience difficulties whenever skills must be transferred or generalized to the natural environment. In summary, we are teaching social interaction and social/play skills in the target situations in school settings.

Interviews with parents indicate that interactions (greetings, brief conversations) between nonhandicapped children and their child occur in various community settings (grocery store, bus stop, department store, etc.). Most notable are the interactions between severely handicapped and nonhandicapped peers (project children) at the Easter Seals Camp (second year it was integrated). The relationships that had developed between the children carried over into the camp situation and also served as a model to the counselors. In addition, the nonhandicapped project children easily interacted with all the campers with no questions about disabilities or ability for all the campers to participate in activities The following interactions were observed during the camp session: (1) wheelchair races were started by the campers, both handicapped and nonhandicapped, and (2) the counselors observed and modeled how the campers were interacting, handicapped and nonhandicapped.

(8) *Are there unexpected changes in the performance of severely handicapped students, such as increasing motivation or attention, that appear to result from service in integrated settings?*

The findings from the SIOS during 1981-1983, the observation system used to monitor the behavior of severely handicapped students in the presence of nonhandicapped peers in comparison to their teacher, resulted in sufficient data points to compare child-child, teacher-child dyadic interactions across time for six children, with additional data points for six children. As a result, a substantial amount of data has been accumulated for these twelve children during 1981-1983 offering a unique opportunity to observe the child-child, peer-child and comparison of the two dyads over a 1½ year period. HIP staff has begun in depth analysis of data generated from these observations and initial findings are summarized in the following paragraphs.

SIOS Description and Data Analysis

Written by Dr. Jerry Brennan
Hawaii Integration Project Coordinator

The Social Interaction Observation System (SIOS)

The SIOS is essentially a sign observation system which enables us to observe objectively the interactions between handicapped and nonhandicapped children, the focus of our project. The SIOS is an essential instrument in our evaluation of the program. It provides us with information about the quality of the interactions between the handicapped and nonhandicapped children so that we can improve the implementation of the program, and improve the quality of the interactions between the children.

The SIOS is essentially a sign system where a number of behaviors can be checked simultaneously. Two different dyad situations will be observed: 1) a dyad of special education-regular education children; and 2) a teacher with the special education child. The observation session begins by the observer first recording some background information about the setting, who is being observed, who is doing the observation, etc. Then, the actual observation begins. The observer focuses on one member of the dyad, watches for a brief interval (10 seconds), then records results for a brief interval (again 10 seconds). About forty behaviors are observed. These include such things as the orientation of the person, his/her affect, position to the other member of the dyad, whether touching occurs, what objects are present, what kind of play behavior is occurring, vocalizations, and intrusions that occur.

A copy of the observation system (SIOS) and a review of the SIOS Observers' Training Schedule is included in Appendix C. The first page of the SIOS is simply a title page. Page 2 has three sections to fit it. First, there is a section that is completed before the observation begins. Information such as observer codes, the school code, dates, and I.D. numbers for the handicapped and nonhandicapped persons may be coded. The numbers of other people in the room, any special conditions, such as the room being rearranged or a move to a new room, are recorded on this page. Critical incidents are also noted; if the special education child has had seizures or sleep problems or some medication change, this will be recorded, as it could very well affect the data. Next, two procedural details are recorded: 1) the time sampling interval (this will probably be the ten-second record interval); and 2) the type of observation (whether it is primary data, practice or reliability data). We will occassionally do reliability checks, when two observers watch and code the same behavior.

The second section is completed just before the observation is about to begin, and it consists essentially of some timing parameters. We will measure when he or she begins interaction with the special education child. This data will be collected only for scheduled interactions between regular education and special education children. From it we get some indication

of the implementation of our program. There is a certain time frame when they are supposed to be interacting, and we will see if indeed they are. There will probably be individual differences in how long it takes a child to reach the classroom, and there will be differences in how long it takes from the time the room is entered until the interaction really begins. This may very well relate to certain motivational factors, and we may find differences in the quality of the interactions later on that are correlated with the length of time it takes from entering the room to beginning the interaction.

Finally, on this second page is a brief section that is completed after the observation. So, after the next two pages are completed, the observer comes back and fills out a couple of points here. First, we would like to know an overall rating of the special education student's arousal prior to, during, and after the observation session. This enables us to get some idea of the overall effect of the interaction session. And we can also see if prior arousal affects the quality of the interaction. So we can begin to answer a couple of questions here. We are also interested in the eye level of the nonhandicapped person relative to the special education child.

The next two pages of the SIOS are identical. These are the heart of the observation system itself. First, at the top is a code labeled "Non Number." In this, for each observation period, there is a column and you will check which nonhandicapped person is being observed. Either Person #1, Person #2, or possibly some other person. The Numbers 1 and 2 correspond to the previous page where we have recorded the number of the first non-sped I.D. Number or the second non-sped I.D. Number. We closely monitor only two people. If other people enter into the situation, we don't keep track of their I.D. Number. We simply code them as other. Next, for each of the ten-second intervals in which we observe the nonhandicapped person, we check whether they are inside or outside.

At the top over to the right we can also check what activity is occurring, moving around, playing with toys, music, etc. Now, below the horizontal line are the lists of behaviors, one side for nonhandicapped and the other side for the handicapped. We begin observing on the left-hand side, which is the handicapped. Then after a ten-second observation, ten-second recording, we move to the other side and observe behavior's over there. Next, back to the nonhandicapped side. This alternation continues for the duration of the observation.

Behaviors on each side are very similar, but not identical. They cover the areas mentioned previously, beginning with orientation, then affect, and then position. Now, since this is a sign system, all behaviors that occur during the interval are checked. It is possible, although highly unlikely, that every single circle in a given column could be checked.

There are twenty columns on each page for a total of forty columns. To complete one column requires possibly ten seconds observing and ten

seconds recording for a total of twenty seconds. We have forty columns; twenty seconds would be eight hundred seconds, or translating to minutes would be thirteen minutes and twenty seconds. This is the maximum length of time that we would be able to observe the record behavior. Now, there will probably be some instances where we won't be able to get the full thirteen minutes and twenty seconds.

From this we should be able to determine a number of things. First, are the children interacting when they are supposed to be, or are they doing something else? Second, if they are interacting, we want to learn more about the nature of these interactions; what kinds of general play activities are they engaging in? Third, we would like to monitor the impact of the interactions upon the special education student. Does his or her behavior change when s/he is with the regular education child? If so, does this change persist after s/he has left? Are interactive skills learned which generalize to other situations?

We will also observe the regular education students for behavior changes: Do they learn interaction skills? Does their enjoyment of the play situations increase as time passes? Do they initiate interactions during free play period? (We'll be observing free play periods also.)

Finally, we hope to learn what effects specific regular education behaviors have on particular special education children. While our primary interest is in the scheduled interaction between regular education and special education students, we are also interested in observing behaviors of the special education students during free play time, and during interactions with teachers, in order to determine what differences, if any, exist. As time passes, we hope to see some convergence in the interaction behaviors in these three situations: scheduled regular education-special education interactions, unscheduled regular education-special education interactions, and teacher-special education interactions.

Reliability

The sample. The two primary observers, doing 80% of the data collection, jointly observed 44 sessions of approximately 20 intervals each for a total of 649 observation intervals. These observations were on nine different special education children interacting with eight different peers or teachers.

The results. Phi and kappa coefficients were computed for each of the 44 special education behaviors observed and for each of the 44 nonhandicapped behaviors. These data are displayed in Table 5.22. Three kappas are below .70, ten are below .80, and 25 are below .90. Thus 63 of the 88 coefficients are above .90 reliability. The lowest kappa was .65.

TABLE 5.22

SIOS Interrater Reliability for 649 Observation Intervals

	OBSERVER					
Variable	Neither	One	Two	Both	Phi	Kappa
NORSPE	110	23	21	495	.791	.791
NOROBJ	219	24	54	352	.753	.750
NORAWA	418	14	26	191	.860	.860
NAFNUE	87	3	15	544	.892	.890
NAFPOS	543	11	3	92	.918	.917
NAFNEG	649	0	0	0	.	.
NAFDIS	649	0	0	0	.	.
NPOCLO	24	1	4	620	.903	.902
NPOFAR	599	2	7	41	.895	.894
NPOFRO	300	2	6	341	.975	.975
NPOSID	390	4	6	249	.968	.968
NPOBEH	598	3	5	43	.908	.908
NPOMOV	530	6	11	102	.908	.907
NTONON	397	4	4	244	.974	.974
NTOACC	570	7	4	68	.916	.916
NTOATT	556	3	25	65	.809	.799
NTOCOM	643	0	0	6	1.000	1.000
NTOGUI	424	26	7	192	.886	.884
NTOPOS	612	1	3	33	.940	.940
NTONEG	649	0	0	0	.	.
NOBNON	541	0	1	107	.994	.994
NOBNOC	500	3	4	142	.969	.969
NOBDEM	362	10	3	274	.959	.959
NOBOFF	580	1	9	59	.916	.913
NOBACC	649	0	0	0	.	.
NOBADJ	593	4	0	52	.960	.960
NPLAPP	280	13	5	351	.944	.944
NPLINA	649	0	0	0	.	.
NPLPAR	434	1	4	190	.982	.982
NPLCOO	489	4	7	149	.953	.953
NPLINT	649	0	0	0	.	.
NVONON	555	2	2	90	.975	.975
NVOATT	635	2	3	9	.779	.779
NVOSPE	335	30	26	258	.825	.825
NVOAPP	506	12	17	114	.860	.859
NVODIS	645	0	1	3	.865	.856
NVOQUE	578	7	10	54	.850	.850
NVOADU	529	8	4	108	.936	.936
NVOPEE	619	2	10	18	.752	.741
NVOTAL	649	0	0	0	.	.
NVOOTH	648	0	1	0	.	.
NVOSIN	617	2	3	27	.911	.911
NVOLAU	639	0	2	8	.893	.887
NINTRU	646	0	0	3	1.000	1.000

TABLE 5.22
(cont.)

	OBSERVER					
Variable	Neither	One	Two	Both	Phi	Kappa
SORNON	420	19	17	193	.874	.874
SOROBJ	313	20	25	291	.861	.861
SORAWA	140	26	55	428	.694	.690
SORSPA	646	0	1	2	.816	.799
SAFNEU	60	4	6	579	.915	.915
SAFPOS	601	5	3	40	.903	.902
SAFNEG	627	1	1	20	.951	.951
SAFDIS	649	0	0	0	.	.
SPOREC	616	0	0	33	1.000	1.000
SPOACT	34	2	1	612	.955	.955
SPOPAS	629	1	0	19	.974	.974
SPONPU	622	6	2	19	.823	.820
SPOPUR	619	0	12	18	.767	.741
STONON	421	3	6	219	.969	.969
STOACC	531	7	8	103	.918	.918
STOATT	594	7	20	28	.762	.653
STOPOS	618	1	4	26	.910	.908
STOPLA	391	21	5	232	.916	.915
STONEG	647	0	0	2	1.000	1.000
STOWIT	649	0	0	0	.	.
SOBNON	545	0	11	93	.936	.934
SOBNOC	443	13	0	193	.954	.953
SOBTOU	607	0	20	22	.712	.673
SOBREA	366	21	0	262	.936	.934
SOBOFF	648	0	0	1	1.000	1.000
SOBACC	604	0	1	44	.988	.988
SPLAPP	334	5	2	308	.978	.978
SPLINA	643	0	0	6	1.000	1.000
SPLPAR	446	3	11	189	.949	.949
SPLCOO	528	9	3	109	.937	.937
SPLINT	649	0	0	0	.	.
SVONON	230	14	14	391	.908	.908
SVOSND	416	14	17	202	.893	.893
SVONDI	649	0	0	0	.	.
SVODIS	648	1	0	0	.	.
SVOREP	649	0	0	0	.	.
SVOHUM	464	0	0	3	1.000	1.000
SVOLAU	639	0	2	8	.893	.887
SVOWHI	634	0	0	15	1.000	1.000
SVOPRO	645	0	1	3	.865	.865

Thumbnail Sketches of Each of the Children (Written by Observers)

No. 018: He uses a wheelchair, which he can manipulate quite well. His coordination seems poor and he has a difficult time using his hands when working puzzles and recorders, but with time he manages. He finishes puzzles and can tune in a small radio. He can crawl. He is a very happy individual when receiving attention, but becomes angry and jealous when attention is directed to others. He can say a few words but cannot converse with anyone. He is lovable.

No. 026: She is sweet and not disruptive. She just sits and doesn't seem too interested in anything. She can move her hands and touch toys that are suspended. She cannot manipulate her wheelchair. When interaction is occurring she smiles and responds, but does not focus on objects or person with much interest. Her head droops forward most of the time.

No. 025: She is dainty, well dressed and pretty and it is obvious that she is adored by her parents and family. She responds to love and seeks it constantly. She whines if left for any length of time. She can sit up in a wheelchair and also on a mat for a short time. She can use her hands but does not manipulate her wheelchair. She makes non-language sounds. She is pleasant, smiles and seems happy. She responds to instructions but her interest span is short. She does focus her attention on Non and on objects.

No. 011: He is adorable. He is bright and really would love to converse. He is interested in everything and has shown great progress this year. He can manipulate his walker, but not his wheelchair. He is always smiling and friendly. He responds to Non and gives direct and non direct words. His vocabulary is small but he tries to answer. He obviously has great support from his family. He responds to instructions and wants to achieve.

No. 023: He appears to be a perfect child. He can run, play, use his hands, but does not talk. He makes non-language sounds. He is a handsome child. He is very disruptive sometimes. If he is playing with something he likes he can be sweet and quiet. When interacting with Non he is very difficult most of the time, but when cooperative he follows instructions and does very well. He seems very hyper and uncontrollable, but has an excellent teacher who knows exactly how to handle him.

No. 069: He is cheerful, optimistic, can carry on a small conversation, joke and talk to people. He is aware of people in the room. He uses a wheelchair but cannot push himself. He does feed himself.

Observations of Severely Handicapped Students

Discussion of Tables 5.23-5.34. The following eleven tables provide information about interactions with special education children. Each table contains information for each of six special education children separately. In this way the individuality of the data for each child is not lost but due to the presence of six replicates some general

conclusions may be posited. Collapsing across children with very different behavioral repertoires would probably distort the interrelationships and is not done in any analysis in this document.*

Mean levels for SPED and NON behaviors

Table 5.23 details for each of the six selected SPEDs their mean percentage level on all of the behaviors observed by the SIOS observation system for the 1981-1983 year. Each observation is comprised of twenty intervals, during which each of the behaviors could occur or not occur A percentage is gotten by comparing the number of occurrences to the total possible number of intervals, which is twenty. These percents are then averaged across the number of observation points. For example, for SPED 11, Table 5.23, there were 52 observations. Each one of these observations had twenty intervals in it and for the first variable which was observed, SORNON stands for SPED "Orient to NON", he was oriented 11.5% of the time to the non. The standard deviation of this was 22.6. There was an interval where he did not orient to the non at all--0% of the time; and there was another observation where he was oriented to the non 100% of the time.

Moving to the second variable, we have SPED "Orient to Objects"--he was oriented toward objects 40.6% of the time. Again, there was an interval where he was not oriented to objects at all--0%; and there was another interval where he was oriented 100% of the time to objects. This does not mean that he never looked away from the objects, but it means that each of the twenty intervals, in each of the fifty-two observation sessions, he looked at the objects at least briefly. Continuing, he was "Oriented Away" 61% of the time and he was "Oriented into Space" or non-focused about .2% of the time, and had "Neutral Affect" about 8% of the time, "Postive Affect" about 12%, "Negative Affect" .6%, and " Distress" was displayed a little over 1% of the time.

To summarize for SPED 11, he was "Oriented Away" about 61% of the time, looking at objects a bit less than 40%, and paying attention to the peer or nonhandicapped about 11% of the time. Turning to his affect it is primarily neutral, with only about 12% of the time positive affect shown. For position, he is characterized as "Active Reclining" about 81% of the time. For touch, about 47% of the time there is no touch occurring. "Accidental Touch" occurs about 36% of the time, with "Touch Play, Maintain Contact" about 14% of the time. "Negative Touch" behaviors occur very infrequently--less than 1% of the time. Turning to objects, about 25% of the time there were no objects present. About 23% of the time objects are present but they are not touched. 39% of the time objects are touched, and objects are reached for about 15% of the time. Less than 1% of the time does the SPED offer an object and objects are offered and accepted about 6% of the time. Turning to play behavior, 43% of the time play behavior of SPED 11 is deemed appropriate. Breaking this down, 22% of the time "Parallel Play" is occurring; 20% of the time play is cooperative. "Interactive Play" with SPED 11 never occurred. Vocalizations were infrequent for this child. 66% of the time there were no

*Chassan, J.B. Research design in clinical psychology and psychiatry. (2nd Edition) Halsted Press: NY, 1979, pg. 317-318.

Table 5.23
(Job 569)

Correlations: Background with SPED Behaviors
for selected SPEDS

SPED = 11 N = 52

VARIABLE	MEAN	STD DEV	MINIMUM	MAXIMUM
SORNON	11.5	22.6	0	100
SOROBJ	40.6	35.5	0	100
SORAWA	61.4	32.8	0	100
SORSPA	0.2	1.4	0	10
SAFNEU	86.9	16.6	20.0	100
SAFPOS	12.3	16.5	0	80
SAFNEG	0.6	2.4	0	10
SAFDIS	1.1	4.9	0	25
SPOREC	14.9	34.3	0	100
SPOACT	81.2	37.3	0	100
SPOPAS	16.7	36.0	0	100
SPONPU	1.3	2.5	0	10
SPOPUR	10.6	23.9	0	100
STONON	47.1	32.8	0	100
STOACC	36.3	28.6	0	100
STOATT	1.4	5.8	0	40
STOPOS	1.4	4.2	0	25
STOPLA	13.6	23.8	0	100
STONEG	0.3	1.5	0	10
STOWIT	0	0	0	0
SOBNON	25.2	37.3	0	100
SOBNOC	20.7	29.5	0	100
SOBTOU	39.4	37.8	0	100
SOBREA	15.0	26.7	0	100
SOBOFF	0.6	2.9	0	15
SOBACC	6.2	15.7	0	70
SPLAPP	43.1	39.2	0	100
SPLINA	0	0	0	0
SPLPAR	22.4	30.2	0	90
SPLCOC	20.1	30.6	0	100
SPLINT	0	0	0	0
SVONON	66.0	24.8	10	100
SVOSND	25.4	22.1	0	90
SVONDI	1.4	5.5	0	35
SVODIR	5.8	13.9	0	75
SVOREP	0.2	1.4	0	10
SVOHUM	0.6	3.0	0	20
SVOLAU	0.9	3.7	0	25
SVOWHI	0.5	1.5	0	5
SVOPRO	0.7	2.4	0	10
SINTRU	0.5	2.3	0	15

Table 5.23
(cont.)

SPED = 23 N = 55

VARIABLE	MEAN	STD DEV	MINIMUM	MAXIMUM
SORNON	8.8	10.2	0	35
SOROBJ	54.2	28.3	0	100
SORAWA	55.3	29.5	0	100
SORSPA	0.4	1.3	0	5
SAFNEU	94.8	10.4	45	100
SAFPOS	4.1	9.4	0	55
SAFNEG	1.2	5.4	0	30
SAFDIS	0.1	0.7	0	5
SPOREC	0.9	5.5	0	40
SPOACT	93.9	11.9	40	100
SPOPAS	0.7	3.3	0	22
SPONPU	4.6	7.8	0	40
SPOPUR	53.9	30.2	0	100
STONON	31.7	30.6	0	100
STOACC	46.5	29.7	0	100
STOATT	2.3	6.4	0	30
STOPOS	1.5	5.6	0	40
STOPLA	17.7	24.1	0	85
STONEG	0.3	1.2	0	5
STOWIT	0.5	1.7	0	10
SOBNON	9.9	19.2	0	100
SOBNOC	23.1	25.1	0	100
SOBTOU	48.8	30.1	0	100
SOBREA	16.2	24.7	0	80
SOBOFF	0.6	2.2	0	10
SOBACC	5.7	12.9	0	60
SPLAPP	29.2	28.4	0	90
SPLINA	0.5	1.7	0	10
SPLPAR	14.3	20.9	0	75
SPLCOC	12.8	19.7	0	85
SPLINT	0	0	0	0
SVONON	62.3	22.4	0	85
SVOSND	37.4	22.5	0	85
SVONDI	0.2	0.9	0	5
SVODIR	0.2	0.9	0	5
SVOREP	0	0	0	0
SVOHUM	0.1	0.7	0	5
SVOLAU	0.2	0.9	0	5
SVOWHI	0	0	0	0
SVOPRO	0.2	1.0	0	5
SINTRU	0.4	1.6	0	10

Table 5.23
(cont.)

SPED = 26 N=33

VARIABLE	MEAN	STD DEV	MINIMUM	MAXIMUM
SORNON	12.1	16.5	0	76
SOROBJ	42.1	32.6	0	100
SORAWA	59.1	30.5	0	100
SORSPA	7.3	15.7	0	55
SAFNEU	89.1	15.7	40	100
SAFPOS	9.7	15.2	0	60
SAFNEG	1.1	6.1	0	35
SAFDIS	0	0	0	0
SPOREC	43.1	33.4	0	100
SPOACT	55.4	34.5	0	100
SPOPAS	13.8	27.9	0	100
SPONPU	2.5	7.3	0	35
SPOPUR	7.4	13.5	0	55
STONON	37.9	27.0	5	100
STOACC	51.5	26.0	0	100
STOATT	1.7	5.6	0	30
STOPOS	0.5	1.5	0	5
STOPLA	8.9	18.1	0	80
STONEG	0.2	0.9	0	5
STOWIT	0.2	0.9	0	5
SOBNON	14.1	32.6	0	100
SOBNOC				
SOBTOU	25.1	22.7	0	70
SOBREA	2.7	6.2	0	23
SOBOFF	0.5	2.6	0	15
SOBACC	2.3	8.8	0	50
SPLAPP	17.9	29.3	0	100
SPLINA	0	0	0	0
SPLPAR	10.5	19.9	0	75
SPLCOC	5.6	18.8	0	100
SPLINT	0	0	0	0
SVONON	88.3	15.1	55	100
SVOSND	10.9	13.9	0	45
SVONDI	0	0	0	0
SVODIR	0.2	0.9	0	5
SVOREP	0	0	0	0
SVOHUM	0	0	0	0
SVOLAU	1.5	5.3	0	25
SVOWHI	0	0	0	0
SVOPRO	0	0	0	0
SINTRU	3.7	13.1	0	75

Table 5.23
(cont.)

SPED = 30 N= 28

VARIABLE	MEAN	STD DEV	MINIMUM	MAXIMUM
SORNON	13.6	15.7	0	54
SORCBJ	79.3	26.5	0	100
SORAWA	10.9	9.4	0	35
SORSPA	7.8	13.6	0	60
SAFNEU	67.8	29.4	0	100
SAFPOS	46.2	27.0	0	100
SAFNEG	0	0	0	0
SAFDIS	0	0	0	0
SPOREC	98.9	3.3	90	100
SPOACT	0	0	0	0
SPOPAS	0	0	0	0
SPONUP	0.2	1.0	0	5
SPOPUR	0	0	0	0
STONON	68.5	34.9	0	100
STOACC	16.8	24.5	0	85
STOATT	0	0	0	0
STOPOS	0	0	0	0
STOPLA	14.6	27.9	0	100
STONEG	0	0	0	0
STOWIT	0	0	0	0
SOBNON	1.1	3.1	0	10
SORNOC	17.2	15.5	0	54
SOBTOU	20.4	31.3	0	100
SOBREA	56.6	35.4	0	100
SOBOFF	0	0	0	0
SOBACC	0.5	2.7	0	14
SPLAPP	56.1	44.0	0	100
SPLINA	0	0	0	0
SPLPAR	4.0	15.7	0	80
SPLCOC	22.6	36.7	0	100
SPLINT	6.6	18.0	0	80
SVONON	65.3	23.3	0	93
SVOSND	0	0	0	0
SVONDI	0.8	2.8	0	11
SVODIR	16.5	13.6	0	50
SVOREP	0	0	0	0
SVOHUM	0	0	0	0
SVOLAU	20.6	29.5	0	100
SVOWHI	0	0	0	0
SVOPRO	0	0	0	0
SINTRU	2.5	6.3	0	26

Table 5.23
(cont.)

SPED = 50 N = 22

VARIABLE	MEAN	STD DEV	MINIMUM	MAXIMUM
SORNON	5.8	6.4	0	20
SOROBJ	70.5	16.6	16	95
SORAWA	42.9	17.0	20	83
SORSPA	0.9	1.9	0	5
SAFNEU	96.6	7.0	75	100
SAFPOS	38.6	16.3	15	65
SAFNEG	0.9	3.3	0	15
SAFDIS	0.2	1.1	0	5
SPOREC	0	0	0	0
SPOACT	99.8	1.1	95	100
SPOPAS	0	0	0	0
SPONPU	16.3	13.8	0	45
SPOPUR	7.4	7.2	0	25
STONON	85.7	13.8	41	100
STOACC	7.9	7.5	0	30
STOATT	0.2	1.1	0	5
STOPOS	2.3	10.7	0	50
STOPLA	3.4	5.4	0	20
STONEG	0	0	0	0
STOWIT	0.5	2.1	0	10
SOBNON	13.6	11.1	0	40
SOBNOC	16.8	14.1	0	50
SOBTOU	69.4	16.7	41	95
SOBREA	28.6	16.2	0	55
SOBOFF	3.0	4.5	0	15
SOBACC	1.0	3.5	0	16
SPLAPP	45.6	21.3	10	90
SPLINA	0	0	0	0
SPLPAR	21.1	21.0	0	80
SPLCOC	18.0	20.2	0	80
SPLINT	0.4	1.8	0	8
SVONON	80.0	15.2	40	100
SVOSND	10.0	14.6	0	60
SVONDI	0	0	0	0
SVODIR	8.4	6.6	0	20
SVOREP	0.5	2.1	0	10
SVOHUM	0	0	0	0
SVOLAU	1.1	5.3	0	25
SVOWHI	0	0	0	0
SVOPRO	0	0	0	0
SINTRU	11.1	20.9	0	100

Table 5.23
(cont.)

SPED = 69 N = 16

VARIABLE	MEAN	STD DEV	MINIMUM	MAXIMUM
SORNON	4.4	9.2	0	33
SOROBJ	19.9	22.9	0	60
SORAWA	18.3	19.8	0	62
SORSPA	62.1	29.6	0	100
SORNEU	87.3	17.1	35	100
SAFPOS	3.0	7.3	0	26
SAFNEG	3.3	6.4	0	20
SAFDIS	13.1	18.3	0	62
SPOREC	99.0	3.9	85	100
SPOACT	0	0	0	0
SPOPAS	0	0	0	0
SPONPU	10.8	16.0	0	50
SPOPUR	0.3	1.4	0	6
STONON	52.7	25.5	6	100
STOACC	15.4	15.6	0	50
STOATT	0	0	0	0
STOPOS	0	0	0	0
STOPLA	35.7	35.8	0	100
STONEG	0	0	0	0
STOWIT	0	0	0	0
SOBNON	2.6	10.3	0	41
SOBNOC	48.6	25.0	7	86
SOBTOU	17.9	26.9	0	85
SOBREA	17.3	27.9	0	81
SOBOFF	0	0	0	0
SOBACC	15.5	16.8	0	50
SPLAPP	39.9	38.9	0	100
SPLINA	1.9	5.3	0	18
SPLPAR	1.2	2.7	0	9
SPLCOC	29.8	38.1	0	100
SPLINT	3.1	10.1	0	40
SVONON	68.2	22.0	37	100
SVOSND	21.0	22.7	0	68
SVONDI	1.8	7.3	0	29
SVODIR	0	0	0	0
SVOREP	0	0	0	0
SVOHUM	0	0	0	0
SVOLAU	0.4	1.7	0	7
SVOWHI	7.6	12.8	0	35
SVOPRO	0.8	2.2	0	7
SINTRU	4.4	5.4	0	14

vocalizations. When they did occur, 25% of the time they were for "Non-directed, Non-language" sounds. Less than 6% of the time were vocalizations directed and identifiable.

Turning to SPED 23, also described in Table 5.22, we find a somewhat similar pattern for orientation, with 54% of the time the SPED is "Oriented to Objects" and 55% of the time he is "Oriented Away", while only 9% of the time he is "Oriented to the Non". Similarly, affect for SPED 23, was neutral about 95% of the time, 4% positive and about 1% of the time is he negative. Similarly, for position "Active Reclining", 94% of the time. For SPED 23, we see considerably more purposeful movement--54% of the time versus 11% for SPED 11. With SPED 23 we see even more "Accidental Touch" at an almost similar level of "No Touch" occurring--32% of the time. "Play, Maintain Contact" occurred almost 18% of the time for SPED 23. Objects were not present less than 10% of the time versus 25% for SPED 11. Still when objects were present, 23% of the time there was no touching of the objects. Reaching occurred approximately as often for both SPED 11 and SPED 23--16% for SPED 23. Offering is not occurring as it was with SPED 11, but we do find some accepting of objects by SPED 23--almost 6% of the time there was some acceptance of objects during intervals. Turning to play behaviors, 29% of the time behaviors were seen as appropriate play for SPED 23, contrasted with 43% of the time for SPED 11. "Parallel" and "Cooperative Play" occurred about equally often for SPED 23--around 14%, and "Interactive Play" never occurred for SPED 23 as it never occurred for SPED 11. Turning to vocalizations, again we have a high percentage of the time where no vocalizations are occurring--62% for SPED 23, 66% for SPED 11. When the vocalizations do occur they are primarily on nonlanguage sounds--37% of the time. No other type of vocalization occurred more than 1% of the time for SPED 23. This is very similar with SPED 11.

Turning to SPED 26, we can see again many similarities. The orientation is primarily away--59% of the time. Objects 42% of the time, with "Orient to Non" about 12%. Affect is neutral about 89% of the time, positive about 10% of the time, and negative about 1% of the time. For position, there is a little bit more variability for this SPED. 43% of the time we find "Passive Recline" or sitting--that's the child not even holding himself up. "Active Recline", about 55% of the time. That's the one which is the most frequent with the other children. "Passive Movement" occurs about 14% of the time. Turning to touch, we have 38% of the time no touch occurring. We also have over 50% if the time "Accidental Touch" happening, with very little "Negative Touch" behavior going on--less than 1% of the time. Objects are usually present. Only 14% of the time they were not. Objects were touched about 25% of the time. Turning to play, behavior is labeled as appropriate about 18% of the time. None of the behavior is labeled as inappropriate play. Thus much of the behavior was not labeled play at all. Of that 17%, 10% is parallel and about 6% occur is cooperative. "Interactive Play" does not occur as it did not occur in the previous two children. Vocalizations are rarely present in this child. 88% of the time there were no vocalizations whatsoever, and 11% of the time the vocalizations were merely "Nonlanguage Sounds".

Turning to SPED 30, we see again a somewhat similar pattern, but with some important differences. Orientation is primarily to objects 76% of the time; looking away is less than 11% of the time which is in considerable contrast to the other children who are often times looking away. Affect is neutral about 67% of the time, and is positive about 46% of the time. This is a considerable increase over the other children mentioned previously. 99% of the time this child is reclining passively. Touch is rarely occurring--69% of the time there is no touch and when there is, it is accidental touch, occurring about 17% of the time, or touching play to maintain contact about 15% of the time. Objects are usually present for this child, and only 1% of the time there are no objects. However, 17% of the time even though there are objects present, they are not touched. 57% of the time the child reaches for objects within the interval. Turning to play, we see a considerable amount of "Appropriate Play"--56% of the time, with no "Inappropriate Play". "Parallel Play" about 4%, and "Cooperative Play" occurring 23% of the time and "Interactive Play" 7% of the time. No other child previously mentioned has shown any interaction play, so this is a considerable increase. Vocalizations are again often times not present--65% of the time, but there are a considerable percentage of "Directed Vocalization"--16% and 21% of the intervals there is some laughter occurring, again a very different pattern from the previous children.

Turning to SPED 50, we find again a primary orientation to objects 70% of the time, with considerable orientation away 43% of the time, and orientation to non about less than 6% of the time. The affect is neutral about 97% of the time and positive about 39% of the time. Position is active reclining 99% of the time. We see nonpurposeful movement about 16% of the time, and purposeful movement only 7% of the time. 86% of the time there is "No Touch" occurring and "Accidental Touch" occurring about 8% of the time and other types of touch occurring rather infrequently. Objects are usually present for this child only 14% of the time are there none. 17% of the objects are present but not touched and 69% of the time objects are touched. In 29% of the intervals there is some reaching for objects but very little acceptance of objects, approximately 1%. Play is labeled appropriate for SPED 50 about 46% of the time, this broken down into "Parallel Play" about 21%, "Cooperative Play"--18% and "Interactive Play" .0%. Vocalizations are rarely present, 80% of the time there are no sounds and about 10% of the time vocalizations are "Nonlanguage Sounds", with 8% of the time they are "Directed Vocalizations".

Turning to the final SPED in this table, SPED 69, we find some interesting differences. 62% of the time SPED 69 is oriented unfocused off into space, with 18% oriented away on some fixed object and 20% of the time he is oriented to the object and 4% of the time oriented to the non. Affect is neutral 87% of the time, with very little positive or negative--3% for each of those, and 13% distress responses. SPED 69 is virtually always reclining passively with some nonpurposeful movement. No touch occurs 53% of the time, "Accidental Touch" about 15% and "Play, Maintain Contact", this is play behavior in which physical contact is maintained for 3 seconds or more, occurs 36% of the time (36% of the

intervals in which we observed this child, there is this play maintain contact type of behavior). Objects are virtually always present, although 49% of the time there is no contact with the objects that are virtually always present. There is considerable reaching--17% of the time and acceptance is also occurring a good deal of the time, about 15%. 40% of the behavior is appropriate, this breaks down to less than 1% parallel, about is cooperative and 3% is interactive. Again, vocalizations usually don't occur, 68% of the time there were no vocalizations and of these 21% were nonlanguage sounds, 7% were whines or whimpers.

To summarize Table 5.23, which has displayed mean levels and variabilities of behaviors for special education children, in general we see a situation where SPEDS are oriented away or possibly oriented to objects. In one case, the SPED is always oriented off into space in a nondirected fashion. Usually, we see a neutral affect but with considerable positive affect occurring and lesser levels of negative affect. Positioning is often times reclining, sometimes it's inactive and sometimes it's completely passive. We see a tremendous amount of "Accidental Touch"; it seems whoever interacts with the SPED is in there close enough that there is a lot of touching going on, although, of course, there are many intervals where no touch at all occurs--approximately half the time there will be no touching and a good majority of the touching is of accidental nature, or some playing or maintaining contact for 3 or more seconds. Objects are oftentimes present. For some of the children they are virtually always present, but there is a good percentage of the time where these objects are present and not touched. We see considerable reaching behavior--15-20% or so, but considerable less acceptance of objects. Playing is oftentimes appropriate, maybe 40% of so, with the proponderate amount of play being parallel or cooperative. This varies a bit from child to child. We see virtually no interactive play with these children. Vocalizations are generally not present, maybe 65 to 75% of the time there's no vocalizations at all during a ten second interval. When vocalizations do occur, they are usually nonlanguage sounds, with maybe 5-6% of the time some sort of directed vocalization that is interpretable. The SIOS rating then gives a good overview of the sort of average level of SPEDS being observed. They are typically not able to move around very much and are essentially nonverbal. Interactions are characterized by considerable touch and interaction with a fair amount of positive affect occurring, although, of course, a majority of the time the affect is neutral.

Correlations: Background with SPED

Table 5.24 correlates eye level with SPED behaviors. It is hypothesized that if the non is at the same eye level as the SPED this will be conducive to various behaviors of the SPED; whereas, if the non is at a level higher than the SPED other kinds of behaviors will be encouraged or impossible. In Table 5.24, only significant correlations are displayed to two decimal places, with the decimal point itself omitted. Looking at Table 5.24, for SPED 11, "Orientation to the Non" is negatively correlated -.35 with the non being at the same level as the SPED. That is, if he or she is the same eye level, the SPED is less likely to look at the non.

Table 5.24
(Job 569)

EYE LEVEL CORRELATIONS: SAME EYE LEVEL IS CONDUCIVE TO
(For SPED's 11, 39, 69 teacher was significantly more often at same eye level than were peers. There were no such differences for SPED's 23, 26 or 50)

SPED 11	COEF	DESCRIPTION OF VARIABLE
SORNON	-35	Orient to non
SOROBS	32	Orient to objects
SPOACT	31	Active recline
SPOPAS	-39	Passive movement
SPOPUR	35	Purposeful movement
STONON	-29	Touch person none
STOPAS	29	Touch person positive
SOBNON	-47	Objects none
SOBEOU	34	Touches object
SPLAPP	31	Play appropriate
SPLPAR	42	Play parallel

SPED 23	COEF	DESCRIPTION OF VARIABLE
SORAWA	-27	Orient away
SAFBIF	27	Affect distress
SPLCOO	42	Play cooperative
SINTRU	31	Improvements

SPED 26	COEF	DESCRIPTION OF VARIABLES
STONON	-37	No touch
STOACC	61	Touch accidentally
SPLPAR	-35	
SPONON	-43	No vocalization
SPOSND	44	Nonlanguage sounds

SPED 30	COEF	DESCRIPTION OF VARIABLES
SOROBJ	43	Orient to objects
STONON	56	Touch none
STOPLA	-52	Touch play, maintain contact
SOBREA	42	Objects reaches

SPED 50	COEF	DESCRIPTION OF VARIABLES
SORSPA	-47	Non orientation
SPOPUR	50	Purposeful movement
STOPLA	47	Touch play, maintain contact
SOBNON	47	Objects none

SPED 69	COEF	DESCRIPTION OF VARIABLES
SAFNEG	49	Affect negative
SOBTOU	49	Objects touches
SPLAPP	-53	Play appropriate
SINTRU	62	Intrusion

This may seem to be a bit unusual, but I think with a little thought this might not seem so unreasonable. When the non is at a higher level than the SPED, typically, the SPED is on his back with his eyes looking up to the non. Further down the table, we see that the "Orientation to Objects" is positively correlated .32 with the SPED being at the same eye level as the non. Thus if the two of them are at the same level, they can both look at some objects or manipulate some objects. Continuing for SPED 11, we see more purposeful movement when eye level is equal. We also see more positive touch and we see more touching of objects. We see more appropriate play and considerable more parallel play. Turning to SPED 23, we see less orienting away when they are at the same eye level. Affect distress is increased; cooperative play is higher. Turning to SPED 26 we see considerable more accidental touch; we see less parallel play and we have a negative correlation for non vocalization, which means we have an increase in vocalization and these are nonlanguage sounds. For SPED 23 we see more orientation of objects again. We see less touch play maintain contact and more reaching for objects when they are at the same level. With SPED 50 we see less orientation to space; more purposeful movement, more play maintain contact and less likelihood of there being any objects present. SPED 69, we see more negative affect, more objects being touched, and less appropriate play when they are at the same eye level. With SPED 50 we see less orientation to space; more purposeful movement, more play maintain contact and less likelihood of there being any objects present. SPED 69, we see more negative affect, more objects being touched, and less appropriate play when they are at the same eye level. The findings for SPED 69 are interesting. For example, we find that being at the same eye level we have a negative correlation with appropriate play. In other words, when they are at the same eye level, we see less appropriate play. But if we look back to Table 2 with SPED 69, we find that his position is normally that of passive reclining. He is not holding himself up; his position in on his back, stomach or side. If someone were interacting with him and their eye level was above him, he would then probably be on his back and his arms would be able to move. However, if he were over on his side, then it would be possible for the eye level to be the same between the SPED and the non, but I think we would have a less likelihood of "Appropriate Play", because he would have more difficulty moving his arms. It would be interesting to investigate and see exactly what situation this SPED is in during most of these interactions. Thus eye level appears to be an important determinant of SPED behavior but it may be mediated through particular SPED characteristics.

SPED with NON

Turning to Table 5.25, we find correlations between affect of the non and behavior of the SPED. When the affect of the non is positive for SPED 11 we see more orientation to the non; we see much less neutral affect of the SPED. In other words, when the non is smiling, the SPED is more likely to be also. We see more touch; we see more spontaneous vocalizations, both nondirective and directive and we see an increase in laughter. All of these are significant correlations, because it appears that the affect of the non is important in affecting positive

Table 5.25
(Job 596)

NON AFFECT CORRELATIONS: POSITIVE AFFECT OF NON

SPED 11	COEF	DESCRIPTION OF VARIABLE
SORNON	36	Orient to non
SAFNEU	-66	Affect neutral
SAFPOS	73	Affect positive
STONON	-27	Touch none
SVONON		Vocalization none
SPONDI	55	Spontaneous vocalizations nondirective
SPODIR	37	Vocalizations spontaneous directive
SPOLAU	35	Vocalizations laughing

SPED 23	COEF	DESCRIPTION OF VARIABLE
SORAWA	-33	Orient away
SAFNEU	-42	Affect neutral
SAFPOS	42	Affect positive
SPOREC	32	Position passive recline
SPOPUR	29	Purposeful movement
STOPOS	45	Touch positive
SOBACC	34	Objects accepts
SPLCOO	30	Cooperative play
SVONDI	38	Vocalizations nondirected
SVOLAU	26	Vocalizations laughter

SPED 26	COEF	DESCRIPTION OF VARIABLE
SORSPA	35	Orient to space
SOBACC	40	Objects accepts

SPED 30	COEF	DESCRIPTION OF VARIABLE
SORAWA	-40	Orient away
SAFNEU	-71	Affect neutral
SAFPOS	65	Affect positive
STONON	52	Touch none
STOPLA	-52	Touch play, maintain contact
SOBTOU	-43	Touch objects
SOBREA	52	Objects reaches
SVONON	-45	Vocalizations none
SINTRU	-43	Intrusion

SPED 50	COEF	DESCRIPTION OF VARIABLE
STOATT	41	Touch attention seeking
STOWIT	41	Touch withdrawal
SOBREA	46	Objects reaches

SPED 69	COEF	DESCRIPTION OF VARIABLE
SPLAPP	58	Play appropriate
SPLCOO	68	Play cooperative
SINTRU	-50	Intrusions

behaviors of the SRED. For SPED 23 we see a similar positive impact of affect of the non's affect to the SPED. He is less likely to orient away; he's more likely to have positive affect and more likely to have positive touch, more likely to accept objects, engage in cooperative play and producing vocalizations. If you will recall from Table 5.23, vocalizations were oftentimes not occurring. We find that affect of the non may very well have an impact on vocalizations on both SPED 11 and 23. For SPED 26 the impact of the non's affect is less compelling. We see more orientation to space and more acceptance of objects. These are the only two coefficients that were significant for SPED 26, suggesting less of an impact of the non's positive affect on SPED 26. For SPED 30 we have a considerable number of significant coefficients. He is less likely to be oriented away and he's more likely to have a positive affect, and he's more likely to touch the non, and he's less likely to be maintaining contact, less likely to be touching objects and more likely to be reaching for objects and less likely to be vocalizing, when the non's affect is positive. These findings are a little bit puzzling compared to previous SPEDS. From SPED 50 we see more attention seeking and touch and withdrawal and more reaching for objects. From SPED 69 we see more appropriate play, more cooperative play and less intrusions when the non's affect is positive. Thus positive affect of non appears to be a good indicator of a variety of positive SPED behaviors.

Table 5.26 displays similar correlations for the non behavior "Oriented to the SPED". For SPED 11, when the non is looking at the SPED, the SPED is more likely to be oriented to objects and less likely to be looking away. His affect is less likely to be neutral and he is less likely to be doing passive and nonpurposeful movements. When the non is looking at him, he is less likely to be touching the non, although accidental touches are increased. He is more likely to be reaching for objects and he is more likely to be vocalizing, both nonlanguage sounds and spontaneous nondirected vocalizations are increased. SPED 23, when the non is oriented toward SPED we see more orientation to objects, less distress affect, less passive movement, more accidental touch, less positive touch, more objects being reached for and less inappropriate play. For SPED 26, we see more touch, accidental and touch maintain contact in particular. It is less likely that objects will be present and if they are, they are less likely to be touched when the non is looking at the SPED. For SPED 30, we see an increase in orientation to the non. When the non looks at the SPED we see less touching and less touching of objects when they are present. In SPED 50, we see a decrease in an orientation to objects, and we see an increase in touch behaviors, we see less objects being offered by the SPED, we see less appropriate play, less parallel play and a decrease in vocalizations, except for repeating vocalizations which are increased. For SPED 69, when the non looks at the SPED, we find an increase in orientation to objects, increase in touching objects, decrease in reaching for objects and cooperative play. Thus, the orienting of the non to the SPED appears to have different effects upon different SPEDS.

Turning to Table 5.27, we have the correlations of SPED behaviors with the non when he is oriented to objects. In the previous table, the non was

Table 5.26
(Job 596)

ORIENTATION CORRELATIONS: NON ORIENT TO SPED

SPED 11	COEF	DESCRIPTION OF VARIABLE
SOROBJ	28	Orient to objects
SORAWA	-28	Orient away
SAFNEU	-37	Affect neutral
SAFPOS	31	Affect positive
SPOPAS	-40	Position passive movement
SPONPU	-29	Position non-purposeful movement
STONON	-53	Touch none
STOACC	39	Touch accidental neutral
SOBNON	-46	Objects none
SOBREA	29	Objects reaches
SVONON	-38	Vocalizations non
SVOSND	30	Vocalizations nonlanguage sounds
SVONDI	27	Vocalizations spontaneous nondirected

SPED 23	COEF	DESCRIPTION OF VARIABLE
SOROBJ	26	Orient to objects
SAFDIS	-29	Affect distress
SPOPAS	-39	Passive movement
STONON	-45	Touch none
STOACC	43	Touch accidental
STOPOS	-30	Touch positive
SOBREA	28	Objects reaches
SPLINA	-35	Play inappropriate

SPED 26	COEF	DESCRIPTION OF VARIABLE
STONON	-71	Touch none
STOACC	51	Touch accidental
STOPLA	35	Touch play, maintain contact
SOBNON	-58	Objects none
SOBNOC	43	Objects no contact
SINTRU	-42	Intrusion

SPED 30	COEF	DESCRIPTION OF VARIABLE
SORNON	40	Orient to non
STONON	48	Touch none
STOPLA	-43	Touch play, maintain contact
SOBNOC	45	Objects no contact

Table 5.26
(cont.)

SPED 50	COEF	DESCRIPTION OF VARIABLE
SOROBJ	-42	Orient to objects
STONON	-43	Touch none
SOBOFF	-44	Objects offers
SPLAPP	-45	Play appropriate
SPLPAR	-42	Play parallel
SVONON	59	Vocalizations none
SVOSND	-61	Vocalizations nonlanguage sounds
SVOREP	51	Vocalizations repeats
SINTRU	51	Intrusion

SPED 69	COEF	DESCRIPTION OF VARIABLE
SOROBJ	61	Orient to objects
SOBTOU	52	Objects touches
SOBREA	-51	Objects reaches
SPLCOO	-60	Play cooperative

Table 5.27

ORIENTATION CORRELATIONS: NON ORIENT TO OBJECTS

SPED 11	COEF	DESCRIPTION OF VARIABLE
SOROBJ	63	Orient to objects
SORAWA	-46	Orient away
SPOPAS	-46	Position passive movement
SPOPUR	39	Position purposeful movement
STOPOS	30	Touch positive
SOBNON	-53	Objects none
SOBTOU	62	Objects touches
SPLAPP	70	Play appropriate
SPLPAR	31	Play parallel
SPLCOO	57	Play copperative
SPOWHI	-36	Whimpers, cries

SPED 23	COEF	DESCRIPTION OF VARIABLE
SOROBJ	67	Orient to objects
SORAWA	-40	Orient away
SAFNEG	-30	Affect negative
SPOPAS	-27	Position passive movement
STONON	-44	Touch none
STOPLA	34	Touch play, maintain contact
SOBNON	-32	Objects none
SOBTOU	38	Objects touches
SOBACC	44	Objects accepts
SPLCOO	41	Play cooperative

SPED 26	COEF	DESCRIPTION OF VARIABLE
SOROBJ	46	Orient to objects
SPOPAS	-35	Position passive movement
SOBTOU	42	Objects touches
SOBREA	35	Objects reaches
SPLAPP	49	Play appropriate
SPLCOO	47	Play cooperative

SPED 30	COEF	DESCRIPTION OF VARIABLE
SORNON	-69	Orient to non
SOROBJ	51	Orient to objects
SORSPA	-41	Orient to space
SAFNEU	-51	Affect neutral

SPED 50	COEF	DESCRIPTION OF VARIABLE
SOROBJ	68	Orient to objects
SORAWA	-56	Orient away
SPOACT	42	Position active recline
SOBNON	-43	Objects none
SOBREA	54	Objects touches

SPED 69	COEF	DESCRIPTION OF VARIABLE
SOBTOU	-66	Objects touches

Table 5.28 reports mean percents of NON behaviors for 6 SPEDS separately for peers and teachers. Significant differences between peers and teachers are underlined. The first thing apparent from a perusal of Table 5.28 is the large number of significant differences between peers and teachers. Teachers always orient to SPEDs more than the peers do. Peers spend more time focused on objects. Peers also have a tendency to orient away more often. It is suggested that the teachers focus is upon the special ed. child while the peers focus is upon the play. That is, the teacher is more interested in instruction or teaching the SPED, while the peer is simply interested in playing. The ramifications of this hypothesis suggested by this data in Table 5.28 are considerable. It is suggested that the quality of play between peers and SPEDs is considerably different than the play between teachers and SPEDs. For example, the teacher is more likely to sit in front of the child while peers are more likely to be at the side. The teacher does more guiding--the peer is more likely to engage in parallel play, and is more likely to vocalize to others in the immediate surroundings.

There are also a number of instances where significant differences were not found which are noteworthy. There were no differences between teachers and peers in amount of positive affect. Cooperative play is also just as likely with peers as teachers although there appears to be differences, depending upon the particular dyad. Negative affect virtually does not occur for either the teacher or the peer. Neither the teachers not the peers are upset by the SPED behaviors. Thus it is unlikely that the layman's fears about adverse effects upon peers regarding interactions with severely disabled children is probably unfounded.

Turning to Table 5.29, which lists SPED behaviors, when the SPED is either interacting with a peer or a teacher, one is struck by the paucity of significant differences compared to Table 5.28, which lists NON behaviors. It appears that although peers and teachers exhibit considerably different behaviors with the SPED, the SPED's behaviors care not all that different in the two situations. There appears to be a tendency for somewhat more positive affect by the SPED when interacting with peers and there is somewhat more parrallel play with the peer. The SPED touches the teacher more than he/she does the peer.

Table 5.30 attempts to summarize changes over time for NON behaviors. Again peer behavior changes over time are contrasted with teacher changes over time. Both teachers and peers increase the amount of time spent looking at objects. Sometimes this appears to be at the expense of time spent looking at the SPED but often there is an increase in attending to the SPED also. The tacher increasingly looks away. Accidental touch decreases for both teachers and peers. Appropriate play increases as does parrallel play. Attention seeking vocalizations decrease for both teachers and peers. Overall vocalizations increase to some SPEDs , while others decrease. In general, the direct-on ofchange with a particular SPED is the same for both the teacher and the peer. Positive touch increases for both teachers and peers. The teachers accept fewer objects offered by the SPED as time goes by. Singing and laughing both increase for both peers and teachers.

Turning to Table 5.31, which correlates SPED behaviors with time for 6 SPEDS, many large correlations are in evidence. It appears that these SPEDs are exhibiting considerable changes over the two-year period in which they were observed. For example, in interactions with peers there is a considerable. increase in attending to objects for three of the six SPEDs. Only one of these SPED's shows a comparable increase while interacting with the teacher. The higher percentage of time spent by the peer in looking at objects seems to pay off over time in evoking increased attention to objects by SPEDs as time passes.

Positive affect does not appear to increase over time for either peers or teachers. Attentions seeking touch by SPEDs increases considerably for interactions with both teachers and peers as does touch to play and maintain contact. Positive touch by SPEDs also generally increase for situations with both peers and teachers. Orienting away is also likely to increase for most SPEDs with both peers and teachers. Reaching for objects by the SPED also increases considerably in most cases for both teachers and peers.

In summary, Tables 5.28 - 5.31 demonstrate and display a considerable number of differences in the ways peers and teachers interact with SPEDs. In particular, it appears that peers spend much more time looking at objects while teachers spend more time attending to the SPED. A first look at the SPED responses suggested few differences in how they responded to teachers vs. peers, but a look at changes over time reveals an increase in a variety of PSED behaviors with both peers and teachers. In addition, it appears that the peers in particular are able to increasingly evoke attending to objects by the SPEDs.

Table 5.32 lists variabilities for NON behaviors. Most research studies focus exclusively upon measures of central tendency in conducting analyses of results and neglect the variability in the responses. In general, peers were much more variable in their responses than were teachers. For example, for SPED 11, the standard deviation for the teacher was 14, while the standard deviation for the peer was 27. This difference was statistically significant at p=.05. This increased variability in the peer's behavior may serve to keep the SPED involved or it may represent an inability of the peer to maintain interest from day to day. In this case, the high variability on the part of the peer is probably quite acceptable. From Table 5.28 we can see that the peer was oriented to the SPED 61% of the time, and oriented to the objects 25% of the time. To maintain an average this high, requires considerable involvement on the part of the peer. It is ture that the teacher was able to maintain higher levels (88%), but there were no differences in the amounts of time the SPED spent looking back at the NON and indeed the SPED spent slightly more time looking at the peer (16%) than at the teacher (12%). These figures are from Table 5.29.

Peers are generally more variable from session to session in their amount of vocalization, distance from the SPED, singing, laughing, vocalizing to other people parallel play and the amount of time they spent moving around. Teachers were more variable in the amount of guiding they did, and the amount they used attention seeking vocalizations.

A number of master codes were constructed in an attempt to capture important qualities of the interactions rather than focusing upon whether a particular behavior occurred. For example, it was felt that it might not matter how much time a NON spent looking at a SPED, but what mattered was how much time they spent looking at each other--or, that it didn't matter if the SPED looked at the NON or at the objects, just as long as he was looking at one or the other. Thus, the following seven joint and master codes were set up:

1.	JOROTH	SPED and NON oriented to each other
2.	JOROBJ	SPED and NON oriented to the object
3.	JAFPOS	SPED and NON have positive affect
4.	JOBUSE	SPED and NON both use objects
5.	MORIEN	SPED oriented to either NON or objects
6.	MINTEN	SPED intentional behavior (purposeful, play maintain contact, reaches, offers, accepts, interactive play, touch for attention)
7.	MPLAY	SPED plays (parallel, cooperative or interactive)

Analysis similar to ones done for specific behaviors were done for these joint and master behaviors. These analyses are summarized in Tables 5.33 and 5.34.

Table 5.33 lists mean percents for joint and master behaviors for peers and teachers. Looking at the first joint behavior, SPED and NON oriented to each other at the same time; we find that there are two significant differences between peers and teachers. For SPED 18 the peer interactions for 24 sessions evoked more joint attending. For SPED 25, on the other hand, the teacher evoked significantly more joint attending. For the other four SPEDs no pattern exists and there were no other significant differences.

Turning to joint orienting to objects, we find two SPED interactions where the teacher had more joint attending to objects and one SPED interaction where the peer had more joint attending to objects. Again for the other three SPEDs, no pattern emerges.

For joint positive affect we find very low levels--always under 5%--for both teachers and peers. In addition, there were no significant differences between peers and teachers.

For joint usage of objects, we also find no consistent differences between peers and teachers. Only for SPED 23 is there a significant difference with the teacher having more joint object usage.

Since many of the SPEDs have multiple handicaps it was felt that simply orienting was a worthwhile objective. It was felt that it might not matter if the child was oriented to the NON or to objects as long as s/he was oriented to something, thus a master behavior category was developed which measured to the percentage of time the SPED was oriented to either the NON or the objects that might be present. This data is summarized in row 5 of Table 5.33. Again, we find no consistent pattern of differences that are

significant, the teacher interaction evokes more general orienting.

Another master category was informed which was an attempt to pool any behaviors that might be described as intentional. This included purposeful movements, play maintain contact, touch for attention, etc. For this super category a consistent pattern emerges. The teacher is able to evoke more of it than the peer. For three of the six SPEDs the difference in favor of the teacher was significant at p=.05.

Finally, a master play code was established and mean percents of any type of play behavior for teachers and peers is tabulated in the last row of Table 5.33. Again, as in all but one of the above joint and master codes, no general pattern of differences between mean levels for teachers and peers emerges. For SPED 11, the teacher got more play behavior of one type or another, while for SPED 69 the peer evoked significantly more play behavior.

It appears that teachers may be more effective with some SPEDs and peers may be more effect with other SPEDs in eliciting desireable behaviors at this global level. It is possible that teachers are focused on developing specific behaviors rather than general levels or classes of behaviors. This strategy may be more effective in increasing general levels of behaviors in some children than in others.

As a final attempt to understand some of the dynamics of these interactions, these seven global behavior categories were correlated with time. These data are displayed in Table 5.34. In general, teachers have more positive correlations with time than peers. Teachers were generally getting increased levels of joint orienting to both each other and to objects, and, joint use of objects. In addition, they got increased levels of intentional behavior and play behavior. The peers were more variable. The peer working with SPED 69 shows tremendous increases with time, except for joing affect positive which is not discussed, because as mentioned previously, it occurs so infrequently (never more than 5% of the of the time). Similarly the peers working with SPEDs 11, 23, and 26 show very positive relations with time. Only the peer with SPED 18 shows a negative pattern.

In summary, it appears that the peers are able to evoke acceptable levels of desireable behaviors in quite a variety of SPEDs. In some cases it appears that they are particularly able to get responses that are either higher in frequency or more desireable in other ways than teachers. There are virtually no signs of distress by the NONs in any of the interactions. Increases in desireable responses by the SPEDs over time were the rule rather than the exception in spite of the fact that the Special Friends Program was much more thoroughly executed in the early years of this study and many of the special friends were left to their own in the final year, during which this data was collected.

Table 5.28

Peer-Teacher Mean Percents for NON Behaviors for 6 SPEDS

SPED #	11		18		23		25		26		69	
	P	T	P	T	P	T	P	T	P	T	P	T
NORSPE	61	88	75	82	52	83	80	83	56	81	25	71
NOROBJ	25	37	69	55	27	60	42	33	54	35	74	34
NORAWA	41	18	34	30	43	17	43	29	35	27	21	36
NAFNEU	91	86	91	83	92	91	88	86	86	83	77	89
NAFPOS	10	14	9	16	9	9	12	14	14	18	34	25
NAFNEG	0	0	0	0	0	0	0	0	0	0	0	1
NAFDIS	0	0	0	0	0	0	0	0	0	0	0	0
NPOCLO	91	96	94	96	82	95	95	92	91	92	80	88
NPOFAR	9	6	16	5	21	4	6	11	9	9	20	12
NPOFRO	29	59	24	40	33	56	26	51	40	48	11	2
NPOSID	27	11	69	50	36	24	50	30	38	33	67	85
NPOBEH	37	26	4	6	17	17	20	14	17	11	5	2
NPOMOV	42	21	24	22	40	29	28	23	21	21	9	6
NTONON	67	28	72	50	74	28	55	32	66	30	49	29
NTOACC	18	18	9	11	17	19	9	10	13	11	5	4
NTOATT	4	5	11	11	1	7	10	8	8	6	0	5
NTOCOM	4	3	2	0	1	0	1	1	0	1	1	0
NTOGUI	6	46	5	24	13	40	16	46	10	51	43	64
NTOPOS	0	1	1	3	0	5	9	3	1	2	1	3
NTONEG	0	0	0	0	0	1	0	0	0	0	0	0
NOBNON	48	24	0	16	8	7	29	22	18	11	3	2
NOBNOC	15	18	49	35	50	22	27	26	19	41	16	27
NOBDEM	28	30	45	40	28	45	41	27	53	32	22	10
NOBOFF	5	13	0	6	4	7	6	17	8	8	2	24
NOBACC	1	2	0	0	0	3	0	0	0	1	0	0
NOBADJ	4	14	6	4	9	18	4	8	2	10	57	51
NPLAPP	31	42	50	43	36	47	39	35	62	29	76	42
NPLINA	0	0	0	0	1	0	0	0	0	0	1	0
NPLPAR	12	12	34	19	27	20	15	17	48	17	26	0
NPLCOO	19	30	16	23	7	27	25	17	14	12	43	6
NPLINT	0	0	0	0	0	0	0	0	0	0	2	2
NVONON	32	8	28	11	49	11	29	16	41	16	41	32
NVOATT	14	13	4	7	27	16	9	12	8	14	2	19
NVOSPE	31	50	41	47	16	43	36	38	35	35	25	11
NVOAPP	8	24	11	20	1	22	7	18	3	21	3	27
NVODIS	0	1	0	1	0	2	0	1	0	0	0	0
NVOQUE	11	20	7	11	6	6	6	8	4	6	0	1
NVOADU	6	6	13	16	5	4	16	22	11	17	14	19
NVOPEE	7	2	7	0	4	1	8	1	1	1	19	2
NVOTAL	0	0	0	0	0	0	0	0	0	0	2	0
NVOOTH	0	0	0	0	0	0	0	0	0	0	0	0
NVOSIN	3	1	1	4	0	5	0	1	3	3	0	0
NVOLAU	0	0	5	2	0	0	1	0	2	0	1	0
SAMPLE n	22	39	14	19	14	53	18	45	17	37	15	9

note : significant p>.05 differences underlined

Table 5.29

Peer-Teacher Mean Percents for SPED Behaviors for 6 SPEDS

SPED #	11		18		23		25		26		69	
	P	T	P	T	P	T	P	T	P	T	P	T
SORNON	16	12	35	23	8	14	20	36	19	13	6	4
SOROBJ	20	44	68	62	23	64	36	27	45	49	24	42
SORAWA	79	66	60	47	77	56	75	71	59	60	18	22
SORSPA	0	0	0	0	0	0	1	2	8	4	55	43
SAFNEU	93	83	84	95	88	91	92	87	90	90	88	90
SAFPOS	7	16	14	12	7	5	7	4	10	9	4	1
SAFNEG	0	1	1	3	5	4	2	6	0	1	1	4
SAFDIS	0	1	0	1	0	0	1	3	0	0	12	12
SPOREC	28	3	0	1	3	0	19	8	31	19	98	99
SPOACT	62	97	99	99	94	97	81	91	60	83	0	0
SPOPAS	35	6	1	3	2	0	17	10	16	6	0	0
SPONPU	1	2	4	1	8	4	0	3	4	2	6	12
SPOPUR	9	13	6	19	42	36	4	2	2	7	0	1
STONON	73	29	70	56	73	30	54	34	70	32	59	47
STOACC	19	28	14	8	18	33	15	22	20	33	9	24
STOATT	1	8	6	12	1	6	8	6	5	6	0	0
STOPOS	1	2	3	3	0	5	9	4	2	1	0	0
STOPLA	5	32	6	22	6	24	14	35	2	27	36	26
STONEG	0	0	0	0	0	2	0	0	0	0	0	0
STOWIT	0	0	0	0	1	0	0	0	0	0	0	0
SOBNON	49	23	0	13	8	7	31	23	18	14	3	0
SOBNOC	22	21	31	30	45	23	42	37	58	46	54	36
SOBTOU	22	27	2	10	37	32	10	15	12	18	6	29
SOBREA	13	24	67	47	10	36	21	11	13	16	31	15
SOBOFF	1	0	0	0	0	1	0	0	0	0	0	0
SOBACC	0	7	0	1	0	4	0	14	0	6	12	28
SPLAPP	29	47	67	52	33	41	33	27	24	22	59	24
SPLINA	0	0	0	0	0	4	0	0	0	0	2	0
SPLPAR	11	23	56	32	24	24	8	14	14	12	17	1
SPLCOO	17	22	11	20	9	16	23	13	10	9	42	8
SPLINT	0	0	0	0	0	0	0	0	0	0	1	4
SVONON	72	58	55	66	72	58	73	63	88	82	68	62
SVOSND	20	26	38	29	27	40	24	28	11	17	19	28
SVONDI	0	2	0	0	0	0	0	0	0	0	5	3
SVODIR	6	12	0	2	0	0	0	0	0	0	0	0
SVOREP	0	1	0	0	0	0	0	0	0	0	0	0
SVOHUM	1	0	0	0	0	0	0	0	0	0	0	0
SVOLAU	0	2	6	2	0	0	1	0	3	1	0	1
SVOWHI	1	0	1	2	0	0	3	8	0	0	4	8
SVOPRO	0	1	0	2	0	3	0	0	0	0	0	1
SAMPLE n	22	39	14	19	14	53	18	45	17	37	15	9

note: significant p<.05 differences underlined

Table 5.30

Correlation with Time: NON Behaviors for 6 SPEDS

	Peer with SPED #						Teacher with SPED #					
Behavior	11	18	23	25	26	69	11	18	23	25	26	69
NORSPE	-1	-3	+1	0	0	+4	+5	0	0	-1	-1	-6
NOROBJ	0	+3	+5	-2	+8	+4	+2	+1	+4	+4	+4	+1
NORAWA	0	-5	-4	+3	-5	-5	+3	+3	+5	+3	+2	+6
NAFNEU	+5	-1	+2	+3	+1	0	+1	+1	+1	+4	+3	-3
NAFPOS	-6	+2	-2	-3	-1	0	-2	+1	-1	-4	-3	+2
NAFNEG	0	0	0	0	0	0	0	0	0	+1	0	0
NAFDIS	0	0	0	0	0	0	0	0	0	0	0	0
NPOCLO	0	-2	+2	-3	+3	+4	-3	-1	+1	-1	0	-9
NPOFAR	+1	+1	-1	+4	0	-4	+4	+4	+2	+3	0	+9
NPOFRO	0	+2	+2	-6	+6	-4	-2	-3	+8	0	+2	-3
NPOSID	-1	-3	0	+4	-2	+6	+1	+3	-4	-2	0	-9
NPOBEH	-1	-2	-2	+2	-6	+2	+1	+2	-7	+3	-3	-1
NPOMOV	+1	0	-3	+3	-5	-1	0	+1	-7	+2	-3	+1
NTONON	-1	0	+1	-3	+1	+1	+1	+1	+7	-2	+3	+6
NTOACC	0	+3	-2	-2	-3	-3	-5	+2	-4	-3	-4	-1
NTOATT	-3	-3	+7	+1	+3	0	+3	+1	+5	+3	+2	-1
NTOCOM	-3	-4	0	+2	-2	-3	-3	+2	-2	-3	-3	0
NTOGUI	+6	+3	-1	+2	-1	+1	+2	-2	-6	+2	-3	-4
NTOPOS	+2	-3	0	+2	+5	-4	-1	+2	+6	+2	+2	-6
NTONEG	0	0	0	0	0	0	0	+2	-1	0	0	0
NOBNON	-1	0	-1	+3	-5	-3	+4	0	-3	+2	+3	+9
NOBNOC	-1	-3	-3	+2	-1	-3	-2	+3	+4	0	-4	+3
NOBDEM	-1	+4	+5	-5	+7	0	-1	+1	+3	-4	+4	-2
NOBOFF	+2	0	0	-5	-1	-2	-1	-6	-3	+3	-1	-4
NOBACC	+5	0	0	0	0	0	-2	0	-2	-1	0	0
NOBADJ	+5	0	-1	-5	-1	+2	-2	-2	-3	-2	-3	0
NPLAPP	0	+3	+4	-4	+6	+5	0	+1	+6	+5	+6	-5
NPLINA	0	0	0	0	0	0	0	0	-1	0	0	0
NPLPAR	0	+4	+5	+2	+7	+5	+1	+5	+7	+3	+5	0
NPLCOO	+1	-1	-1	-5	-1	+1	0	-2	0	+3	+3	-3
NPLINT	0	0	0	0	0	-3	0	0	0	0	0	-3
NVONON	-1	+2	0	-4	-6	-6	-3	+1	+1	-4	+1	-6
NVOATT	-3	+3	-3	0	+1	-4	-6	0	-5	-6	-5	-5
NVOSPE	0	+1	+6	+1	+6	+4	+6	+2	+4	+6	+5	0
NVOAPP	-2	-2	-1	+3	0	+1	0	-5	0	-2	-5	-1
NVODIS	+4	0	0	0	-3	0	-3	-2	-2	-1	-2	0
NVOQUE	+4	-1	-2	-1	+5	0	+5	+2	+6	+2	+4	-2
NVOADU	0	-2	-1	0	+5	0	+2	+4	+3	+5	+1	+9
NVOPEE	-1	-2	+1	+6	+3	-1	-2	+2	+1	+1	0	-1
NVOTAL	0	0	0	0	-2	+2	-2	0	0	0	-2	0
NVOOTH	0	0	0	0	0	0	0	0	0	-2	0	0
NVOSIN	+1	-1	0	+1	-3	0	-1	+1	+4	+2	+4	0
NVOLAU	+4	-4	+1	+3	-2	+3	+1	+1	+2	+1	+1	0
SAMPLE n	22	14	13	18	17	14	39	19	52	44	37	8
SIG COR>	42	53	55	47	48	53	32	46	27	30	32	71

note: correlations rounded to one decimal place and multiplied by ten

Table 5.31

Correlations with Time: SPED Behaviors for 6 SPEDS

	Peer with SPED #						Teacher with SPED #					
Behavior	11	18	23	25	26	69	11	18	23	25	26	69
SORNON	0	-3	-1	-3	-1	+2	+1	0	+3	+3	+2	-2
SOROBJ	+2	-3	+6	-2	+6	+7	-2	-1	0	-4	+1	+6
SORAWA	-2	+1	-5	+6	+1	+1	+5	+3	+3	+4	0	+7
SORSPA	-3	0	+1	-5	-4	-6	0	-5	0	-4	-3	-5
SAFNEU	+3	+1	+2	+5	+1	+3	0	+1	-4	+1	0	-1
SAFPOS	-3	0	-1	-5	-1	-4	0	-2	0	-3	0	-1
SAFNEG	0	-1	-1	+2	0	-3	-2	+2	+5	+1	-1	-3
SAFDIS	-3	0	0	-4	0	-1	-1	0	+1	-2	0	+2
SPOREC	0	0	-1	-8	-6	+4	-2	-6	0	-1	-7	0
SPOACT	0	+3	+1	+8	+8	0	+2	+6	+4	+1	+7	0
SPOPAS	-1	-3	-1	+1	-5	0	0	-2	0	+2	-2	0
SPONPU	-1	-4	-1	+1	-2	-4	+2	+1	0	-1	0	-4
SPOPUR	0	+3	-2	+1	-1	0	0	-3	-7	-3	-3	-3
STONON	-3	+1	0	-4	+1	-1	0	-1	+3	-2	+2	+4
STOACC	-2	-2	-1	-4	-6	-5	-7	-4	-7	-7	-8	+3
STOATT	+5	+1	+9	+4	+4	0	4	+3	+4	+5	+4	0
STOPOS	+5	-1	0	+2	+4	0	-1	+3	+6	+1	+3	0
STOPLA	+6	0	+1	+3	+4	+1	+4	+1	+1	+6	+5	-3
STONEG	-1	0	0	0	0	0	0	0	+3	0	-2	0
STOWIT	0	0	-1	0	0	0	0	0	+1	0	0	0
SOBNON	0	0	-1	+2	-5	-3	+4	0	-3	+2	+3	0
SOBNOC	0	+4	-2	0	+4	-2	0	+2	+5	-3	-5	-1
SOBTOU	-2	+7	-2	-7	-2	+1	-6	-7	-8	-7	-5	-2
SOBREA	+1	-5	+7	0	+7	+3	+4	+2	+6	+3	+7	+2
SOBOFF	+3	0	+9	0	0	0	0	0	-2	0	-1	0
SOBACC	+4	0	0	0	0	+3	-2	-5	-3	+4	0	+6
SPLAPP	0	-5	+2	-5	+1	+6	-2	-1	+3	+4	+6	-2
SPLINA	0	0	0	0	0	-2	0	0	+4	0	0	0
SPLPAR	0	-4	+4	0	+2	+7	-3	+2	+6	+2	+3	-3
SPLCOO	0	0	-1	-5	-1	0	+1	-3	-2	+3	+5	-2
SPLINT	0	0	0	0	0	0	0	0	0	0	0	-1
SVONON	-3	+4	+3	+1	-4	-1	-1	-4	-1	+1	-2	-4
SVOSND	+2	-4	-3	-1	+5	-1	-2	+5	-1	-2	+2	+6
SVONDI	-2	0	0	0	0	+5	0	0	-2	0	0	-2
SVODIR	+3	0	+1	0	0	0	+5	-7	-2	-2	-2	0
SVOREF	0	0	0	0	0	0	0	0	0	0	0	0
SVOHUM	0	0	0	0	0	0	0	0	0	-2	0	0
SVOLAU	0	0	0	-4	-2	-2	0	-5	+1	+1	+2	+2
SVOWHI	-1	-3	0	0	0	-1	-1	+2	0	0	+1	-4
SVOPRO	+1	3	-1	0	0	-3	-2	+1	+4	+1	+1	-2
SAMPLE n	22	14	13	18	17	14	39	19	52	44	37	8
SIG CORR>	42	53	55	47	48	53	32	46	27	30	32	71

note: correlations rounded to one decimal place and multiplied by ten

Table 5.32

Standard Deviation Differences for Peer-Teacher for NON Behaviors

SPED #	11		18		23		25		26		69	
	P	T	P	T	P	T	P	T	P	T	P	T
NORSPE	27	14	24	20	28	17	14	16	24	19	25	22
NOROBJ	29	29	25	30	29	25	35	28	40	30	33	37
NORAWA	26	19	17	23	23	17	28	16	25	19	22	24
NAFNEU	15	18	12	13	16	11	21	16	16	18	28	23
NAFPOS	16	20	11	14	16	12	20	18	15	18	33	31
NAFNEG	0	0	0	0	0	1	0	1	0	0	0	2
NAFDIS	0	0	0	0	0	0	0	0	0	0	0	0
NPOCLO	12	7	7	7	22	13	10	9	18	11	22	24
NPOFAR	13	8	13	7	20	8	10	11	14	12	23	24
NPOFRO	29	38	33	42	36	35	35	35	43	32	24	4
NPOSID	29	22	32	38	32	27	39	32	38	28	35	23
NPOBEH	40	32	5	12	21	22	33	19	31	16	10	5
NPOMOV	40	29	18	29	34	27	34	16	25	16	11	9
NTONON	27	26	19	25	30	24	21	23	18	23	27	22
NTOACC	17	23	6	10	23	22	9	13	13	12	11	7
NTOATT	8	12	8	11	2	11	8	11	8	16	0	9
NTOCOM	6	10	5	1	5	2	2	4	2	4	3	0
NTOGUI	14	31	9	18	23	30	16	28	10	27	31	24
NTOPOS	1	2	3	4	0	8	16	6	2	4	3	4
NTONEG	0	0	0	1	0	1	0	0	0	0	0	0
NOBNON	42	34	0	33	27	13	45	34	38	23	10	7
NOBNOC	23	26	35	27	36	17	29	22	22	31	20	19
NOBDEM	34	32	33	32	29	21	35	29	37	32	28	12
NOBOFF	11	23	0	21	8	12	18	17	19	21	7	22
NOBACC	2	5	0	0	0	8	0	3	0	5	0	0
NOBADJ	8	21	9	6	22	20	10	13	5	17	39	36
NPLAPP	36	35	35	34	36	32	38	33	39	34	30	38
NPLINA	0	0	0	0	4	1	0	0	0	0	3	0
NPLPAR	22	20	34	19	30	24	21	24	36	22	27	0
NPLCOO	30	34	16	23	21	25	36	26	24	20	35	18
NPLINT	0	0	0	0	0	0	0	0	0	0	5	27
NVONON	24	11	28	11	32	13	20	15	31	18	17	15
NVOATT	15	20	4	7	21	24	11	17	8	19	4	15
NVOSPE	30	29	41	47	19	21	17	21	28	21	23	8
NVOAPP	11	19	11	20	3	16	11	15	4	12	6	23
NVODIS	1	3	0	1	2	4	0	2	2	1	0	0
NVOQUE	15	19	7	11	6	7	10	8	8	8	0	2
NVOADU	8	10	13	16	7	7	15	18	11	15	16	26
NVOPEE	10	6	7	0	6	4	9	4	3	2	20	5
NVOTAL	1	2	0	0	0	0	0	2	2	1	5	0
NVOOTH	0	0	0	0	0	0	0	2	0	0	0	0
NVOSIN	10	3	0	4	1	12	1	5	9	8	0	0
NVOLAU	1	1	5	2	1	1	2	1	4	1	2	0

Table 5.33

Peer-Teacher Mean Percents for Joint & Master Behaviors

SPED #	11		18		23		25		26		69	
	P	T	P	T	P	T	P	T	P	T	P	T
JOROTH	13	12	32	19	6	13	16	36	13	15	5	4
JOROBJ	11	28	54	44	14	46	28	14	39	21	17	27
JAFPOS	3	5	1	3	4	1	4	2	2	2	1	0
JOBUSE	14	27	34	31	8	31	20	27	12	15	34	34
MORIEN	31	58	81	71	30	71	51	59	59	58	26	48
MINTEN	29	58	74	76	51	71	40	56	21	45	43	60
MPLAY	27	47	67	51	33	39	35	29	21	21	57	13
SAMPLE n	23	61	24	21	14	84	21	63	22	50	15	9

KEY:

JOROTH SPED and NON oriented to each other
JOROBJ SPED and NON oriented to the object
JAFPOS SPED and NON have positive affect
JOBUSE SPED and NON both use objects
MORIEN SPED oriented to either NON or objects
MINTEN SPED intentional behavior (purposeful, play maintain contact,reaches, offers, accepts, interactive play, touch for attention)
MPLAY SPED plays (parallel, cooperative or interactive)

note:significant $p<.05$ differences underlined

Table 5.34

Correlations with Time: Joint & Master Behaviors

	Peer with SPED #						Teacher with SPED #					
Behavior	11	18	23	25	26	69	11	18	23	25	26	69
JOROTH	0	-4	-2	-3	-1	+3	+1	+1	+3	+3	+2	-2
JOROBJ	+1	-1	+8	-2	+6	+6	+1	0	+2	+2	+4	+1
JAFPOS	-3	-3	-1	-5	-3	-3	-1	-3	0	-3	-1	0
JOBUSE	+1	0	+8	0	+7	+4	+2	0	+5	+5	+5	+2
MORIEN	+1	-4	+5	-2	+5	+6	-3	-2	0	-1	+2	+5
MINTEN	+3	-4	+2	+3	+7	+3	+5	0	0	+8	+6	+3
MPLAY	0	-5	+2	-5	+1	+6	-2	-1	+4	+4	+6	-3
SAMPLEn	22	14	13	18	17	14	39	19	52	44	37	8
SIG COR>	42	53	55	47	48	53	32	46	27	30	32	71

note: correlations rounded to one decimal place. decimal omitted.

This section written by Mary Jo Noonan and Norma Jean Hemphill

Differences among joint and SPED interactions with teachers and with peers

Overall, joint object orientation was generally more frequent with teachers than with peers (see Table 5.33). However, increasing trends in the SPED's orientation to objects tended to increase over time with the peer, whereas the SPED's orientation to objects was variable and mostly decreasing with the teachers (see Table 5.29). There was no difference in joint object use with peers and teachers, except for one instance in which joint object use was greater with the teacher than with the peer (see Table 5.33). SPED reaching for objects increased over time with the teacher more so than with the peer. Similarly, SPED unintentional object touching decreased with the teacher and either increased or decreased less with peers (see Table 5.29).

Taken together, joint object orientation and joint object use, along with related trends in SPED interactions, seem to indicate that teachers did a better job of improving the SPED's object use, but the peers did a better job at improving the SPED's attention to objects during interactions. It might be that the peers tended to focus on entertaining the SPED rather than trying to get the SPED to touch and manipulate the objects. These findings are substantiated by additional measures in Table 5.33 of joint orientation to the peer or teacher and measures of joint intentional behaviors with the peer or teacher (e.g., purposeful movement, maintaining contact, reaches for object, etc.).

Anecdotal information

Anecdotal information from teachers, parents, and project staff reveal that the severely handicapped children discriminate the interaction times and anticipate (smiles, looks, etc.) their nonhandicapped friends in school and in various community settings.

Perhaps equally important, the special education teachers develop different expectations for their severely handicapped students as a function of being located on a general education, integrated campus. Secondary teachers become aware of age-appropriateness as a criteria which provides harsh indictment of many past programs for severely handicapped teenagers; where the skills they are learning are those of very young children, severely handicapped young adults are actually being instructed in a repertoire which is maladaptive to integrated community environments. All special edcuation teachers can also become more tolerant of normal deviancy (nonhandicapped children do not always stand in line either!) and more sensitive to the important social and community living skills which their students really need to function in the real world--not special education environments--by viewing the behavior of nonhandicapped children on a daily basis.

Changes in behavior of severely handicapped students as indicated by parent (of severely handicapped children/youth) reports in telephone interviews have been noted; for example, parents report that interactions have "activated" their child's mind to do things (e.g., the child manipulated herself down the hallway) they had never done before. Another

example, the severely handicapped child cried for "help" when in a bathtub when the water was too hot. Differences in how severely handicapped children interacted with others when in public places, such as the swimming pool and church, was also reported.

(9) *Are there changes in the attitudes or behavior of nonhandicapped students or adults as a function of integrated educational services?*

Data reported previously on children's attitudes have been supported in current project activities: children become increasingly more positive toward their severely handicapped peers and toward individual differences in general as a consequence of participation in activities with those children and even as a function of going to school on an integrated campus (Voeltz, 1980, Voeltz, 1982, Hemphill and Brennan, 1983). The behavior of nonhandicapped students has become increasingly positive, as indicated by parent (of severely handicapped and regular education children) reports in telephone interviews; for example, parents of severely handicapped children report that nonhandicapped peers frequently greet their child like a friend in public places such as the grocery store, at the park, etc., whereas in past years, children only stared or ignored them. These parents in general indicate a shift in their own behavior such that they are no longer ashamed and embarrassed to take their severely handicapped child with them on public outings, a change largely possible due to the increased acceptance of the public in those community settings.

Observations of nonhandicapped students at the Easter Seals Camp revealed how the nonhandicapped children behaved in integrated settings outside of the school. In one example, a severely handicapped youth was having difficulties with the left control flipper when playing pinball with a nonhandicapped youth. The nonhandicapped youth very naturally manipulated the left flipper and the severely handicapped youth controlled the right flipper and the game proceeded. The nonhandicapped children/youth were observably comfortable in all situations at the camp; for example, communicating with nonverbal children, eating, and sharing all camp activities. The reflections of one nonhandicapped project student about being a special friend are included in Table .

As discussed in questions 2 and 5, regular education teachers and staff are willing to promote integrated activities between severely handicapped and nonhandicapped peers. Further, teachers have specified what activities they are more willing to support. The next logical step is to encourage teachers (regular and special education) to initiate the activities through scheduling and organizational arrangements discussed in question 3.

(10) *Are there interaction skills or integration issues which are consistently selected as high priority items by parents?*

Parents indicate an overwhelming need for access to community programs for their children. Ironically, the provision of special school, recreation, and activity programs for severely handicapped children often limits the services available to these children rather than extending them. Generic services are more readily available, closer to home, often cheaper or free, and offer greater variety of services, yet these programs are not accustomed to including severely handicapped children. Parents are

Table 5.35

Special Friends

Going to Special Friends is learning about other people's problems and feelings. The children in the Special Friends program are in some way physically or mentally handicapped. They need professional help, but when you go there, you go as a friend, not as a doctor or psychiatrist.

When I first went to Special Friends, I was scared and didn't know what to say or do, but once you get started, you get to know some of the students and enjoy working or playing with them.

Special Friends is for people who want to be with handicapped children, not feel they should because it's nice or you're supposed to.

I feel I am a Special Friend and I'm glad I am.

Heidi McElhaney
Kaimuki Intermediate
Fall, 1981

not generally concerned with integration per se as much as they are with obtaining access to such programs which can provide the kinds of respite they signify for parents of nonhandicapped children. Parents of nonhandicapped children can simply sign them up for an afterschool program, and no direct parent supervision is required. Parents of severely handicapped children who now attend an integrated public school find their child at home at mid-afternoon with public services ended for the day, and no other services available for them.

Therefore, quality programs for their severely handicapped child is the first concern of parents when looking for programs available in the community. Many parents remarked that, when there are several quality programs from which to choose (e.g., summer programs, after school programs, etc.), then whether or not the program is integrated will be of first priority. This crucial need for "respite" and learning opportunities for their severely handicapped child which equals that which is available for parents of nonhandicapped and their children must be addressed if severely handicapped children are to be fully integrated members of the community. The after school REACH program at Wainalu (sponsored by HIP and REACH) is one such integrated program which parents perceived as offering quality programs in an integrated environment. The HIP-parent for the second year assessed summer programs available in their community, These programs (the Integrated Easter Seals Program included) have led to an increase in awareness of quality integrated programs and to the identification of needed changes or additions to existing services by parents.

(11) *Are these effective methods of providing instruction in neighborhood environments when required? Are there existing supervised community recreation programs which are easier to access than others?*

During the summer of 1981 and 1982, we worked cooperatively with Easter Seals staff who conducted an integrated week of camp (including overnights) involving nonhandicapped and severely handicapped peers. The project continues to work with the educational director of the zoo which has resulted in an integrated (SooZoo) experience for nonhandicapped and handicapped peers. In addition, we have developed a four-hour training program for zoo docents on how to enhance integrated zoo experiences for all disabled children. The training was used as a part of the general docent training and has been shared with zoos all over the world at the international zoo conference. Response to the Zoo Docent Training Manual from zoos all over the United States and Canada has been extremely favorable (60% of all zoos contacted have purchased one or more copies of the training manual). In general, it appears that personal contact with a key person in a generic service followed by direct but participatory assistance in developing the initial activity or activities will result in high involvement, enthusiasm, and concrete results; most generic programs have a designated staff person who can be responsible for what will be viewed as a new program or a new emphasis.

Evaluation Issue	Item	Summary of Information Available
(1) Model Effectiveness Impact	(a) Number and description of different settings where the severely handicapped and nonhandicapped students interact;	Elementary Level School Settings: General Description: 1. Regular education classrooms (special shared activities) and lanais 2. Special education classrooms (recess periods and special events) and lanais 3. Travel Areas: walkways, corridors, spaces outside cafeteria, library, office, etc. 4. Playground (especially recess) 5. General facilities: office, library, health room, cafeteria (lunch), auditorium (assemblies) 6. Field trips (zoo, bowling, picnic, etc.) Specific Examples: Waimea Elementary 1. All severely handicapped pupils spend recess periods on playground with nonhandicapped peers when Special Friends are present. 2. Child 66 spends storytelling hour with regular kindergarten class twice weekly, eats her lunch in the cafeteria daily with table of nonhandicapped peers, 2-3 times per week to recess. 3. Child 76 goes to a Developmental Preschool class for music once weekly. 4. Child 58 goes to a regular kindergarten 2-4 times per month for storytelling hour. 5. All severely handicapped pupils went to school assemblies and a Valentine's Day party in regular first grade classroom. Specific Examples: DeSilva Elementary 1. All severely handicapped pupils attend music weekly in regular kindergarten classes. 2. Adaptive PE specialist leads weekly recess time games in sped class or on playground with reg/sped children. 3. Child 58 attends daily phonics class with regular first grade. 4. Child 56 attends daily phonics class with regular first grade. Secondary Level School Settings: General Description: 1. "Neutral" classroom 2. Outdoors (especially class break periods, recess, before and after school, lunch) 3. Travel Areas: corridors and hallways Specific Examples: Jarrett Intermediate 1. Severely handicapped class watched a movie (educational) on several occasions. 2. Severely handicapped class joined a regular education class to listen to a speaker (football players from the University of Hawaii). 3. Lunch out at McDonalds.

Evaluation Issue	Item	Summary of Information Available
		Community Settings: 1. Week-long camp program on the Big Island. 2. Three group activities in Summer Fun public recreation program (Oahu). 3. Family outings, shopping, etc.: parents report frequent greeting and social exchanges in stores, parks, etc. 4. Neighborhood: parents report interactions after school and on weekends. 5. After-school program at Kainalu.
	(b) Number and description of non-handicapped student interactions;	Approximately 250 regular education students in grades K-12 participated in various structured interaction activities at the five school sites and five replication sites in Kentucky. Additionally, total school enrollment interacts less formally. Year 2 evaluation activities include a descriptive study of nonhandicapped children who participate in Special Friends Program (see also Formative Evaluation, item A.1) in Hawaii project schools.
	(c) Average percentage of time severely handicapped students spend in integrated activities or integrated settings within the school;	The Integration Duration Probes, Table 17, reveal the average amount of time spent by severely handicapped and nonhandicapped in integrated settings on two occasions during the 1981-1982 and 1982-1983 school year.
	(d) Number and nature of inservice activities conducted for regular education students and staff;	1. Pilot of First Grade Social Studies Curriculum by three regular education teachers (first and first-second combination) with 90 students. 2. Pilot Special Alternatives Game and Upper Elementary Social Studies Curriculum by counselor with fifth grade students (30). 3. Pilot Mystery Game with 30 fifth graders and 30 intermediate students of HIP staff. 4. Pilot select activities of 8th grade Social Studies Curriculum with 8th graders (30). 5. Weekly inservice activities with approximately 150 regular Special Friends. 6. Presentation of Special Friends Slide Shows; HIP project school staffs; 6 schools with 212 staff members. 7. Inservice activities with the Kids on the Block disabled puppets with regular special friends at Kainalu; 3 regular education classes at DeSilva, and 2 classes at Waimea, 6 classes at nonproject schools in Hilo. 8. Representatives from the Center for Independent Living presented to 4 classes at DeSilva and 2 at Waimea and 4 classes at nonproject schools.

Evaluation Issue	Item	Summary of Information Available
	(e) Number of compliments and complaints regarding behavior of the severely handicapped students;	Program trainers reported no complaints at project schools regarding behavior of severely handicapped students; the program trainer at Jarrett reported 20 compliments from regular education teachers and 5 from school personnel (Jarrett had one new SVH class added to campus 1981-1982). At the Minors Lane Replication Site (Kentucky), the teacher heard no complints but repeated compliments about obvious changes in students' behavior. She heard these comments by students, teachers and staff and not just those directly involved with Special Friends. NOTE: During November, 1980-May, 1981, compliments and complaints were equally forthcoming regarding regular education children (e.g., compliments: regular attendance, cheerful, helpful, etc.; complaints: irregular attendance, rowdy, self-interested, etc.).
	(f) Number and nature of interactions occurring in neighborhood or after school hours;	Parents (both non and sped) report neighborhood, after school, weekend, and community interactions have increased dramatically since SVH children enrolled in regular schools and Special Friends program began (see also item 1.a).
	(g) Number and type of interactions between general and special educators.	1. During the first project year, there were fewer interactions between teachers in regular and special education. 2. Two regular education teachers and special education teacher participated in a few joint activities such as puppet plays, field trip, library time at two project schools. 3. Special and regular educators occasionally attend staff meetings although generally the staff meetings are separated for both groups. 4. One special educator joined the regular educators on a break and one regular educator frequently had breakfast in the deaf/blind classroom at one school. 5. The Jarrett SH teacher (one SH class on campus) attended all faculty meetings, had lunch with regular education teachers, "socialized" after hours with regular education teachers. Many joint activities occurred during the second project year. 6. Schools where there are several SVH classes, special education teachers rarely took meals, had lunch, or joint meetings with regular education teachers (second project year). 7. Teachers at Kainalu began joint faculty meetings (third year).

Evaluation Issue	Item	Summary of Information Available
(2) Student Status	(a) Student Progress measures;	Information included in this report - Chapter 5, Formative Evaluation, question 1, 8 & 9.
	(b) Evaluation of change;	Evaluation information included in this report - Chapter 5, Formative Evaluation.
	(c) Change linked to intervention.	Comparison and control studies discussed in Formative Evaluation, question 1 & 9.
(3) External validity of Model	(a) Generality of project activities.	The Special Friends Program was replicated in 5 schools in the Jefferson County Public Schools, Louisville, Kentucky. Two elementary schools (Minors Lane and Lowe), two intermediate schools (Kammerer and Bruce Middle) and one high school were included in the replication sites. As detailed in the Formative Evaluation Section, question 1, data in two schools was lost due to fire and policy changes. A third school (Lowe) implemented a buddy (peer tutoring) program. This allowed for a comparison between a peer tutoring program and mutually rewarding friendship program as well as out-of-state replication comparisons. The intervention program (Special Friends) resulted in a significant positive increase in attitudes of nonhandicapped students toward severely handicapped peers. Replication data and studies since 1977 in Hawaii schools substantiate that the Special Friends Program has a significant positive effect on the attitudes of nonhandicapped students. The Special Friends Program is a well documented, well researched intervention and should be transferable to integrated settings throughout the United States. In addition, replication data collected at Lowe which used the peer-tutoring program indicates a significant negative effect on nonhandicapped students toward their severely handicapped peers. Considering research efforts have not adequately demonstrated that peer-tutoring of instructional skills is effective for severely handicapped students (Guarlnick, 1976), and the above findings at Lowe, the peer-tutoring model should not be adopted for the severely handicapped population.

Evaluation Issue	Item	Summary of Information Available
(4) Cost Efficiency	(a) Costs delineated by project participants, objectives, and type of expenditure category;	Estimated costs as of July, 1982, are Kaneohe State Hospital at $48,000/year, Waimano State Institution at $32,000/year, in the child's home at $4,000, and the Hawaii Department of Education for educational expenses at $1,200 (average figure and not broken out for handicapping conditions); adult community living alternatives in Hawaii at $8,000-20,000/year and not nearly as expensive as the two institutional settings. Objective #1: The development of social interaction skills of severely handicapped children will help them adjust to integrated environments. Costs = 30% of total project funds. Objective #2: Development of training methods and materials to prepare educators, administrators, state and community agency staff, parents and nonhandicapped students to include severely handicapped students in integrated settings. Costs = 30% of total project funds. Objective #3: The promotion of mutually beneficial and rewarding peer interactions between handicapped and nonhandicapped peers. Costs = 40% of total project funds. NOTE: Replication of the Special Friends Program using the manual; costs $12 for the manual and approximately $50 to produce the slide show used in the program.
	(b) Costs compared	Objective #1: The development of social interaction skills of severely handicapped children will help them adjust to integrated environments. Costs = 30% of total project funds. Objective #2: Development of training methods and materials to prepare educators, administrators, state and community agency staff, parents and nonhandicapped students to include severely handicapped students in integrated settings. Costs = 30% of the total project funds. Objective #3: The promotion of mutually beneficial and rewarding peer interactions between handicapped and nonhandicapped peers. Costs = 40% of total project funds. Note: Replication of the Special Friends Program using the manual; costs $12 for the manual and approximately $50 to produce the slide show used with the program.

Evaluation Issue	Item	Summary of Information Available
(4) Cost Efficiency (cont.)	(c) Summary analysis.	HIP staff has presented at four major international conferences, two national conferences, disseminated information at four other national conferences, published HIP findings in three journals (one book), four other articles are in progress, presentations at many State and local conferences, workshops, and staff meetings. The success of these dissemination efforts has resulted in approximately 300 requests (local, national, and international) for HIP materials and publications during the third year alone. Dissemination tabulations on specific items are detailed in Chapter 6 of this report.

CHAPTER 6

Dissemination

The Project has explored and utilized a variety of avenues toward efficient, cost-effective dissemination of information about the 31 products developed. We have sent press releases through the Multihandicapped Bulletin Board on SPECIALNET, which is administered by Teaching Research in Monmouth, Oregon. A sample of these releases is included below. The number of purchase requests for HIP materials has been steadily increasing over the project's three year period, as indicated on the dissemination chart below. Response to dissemination efforts have resulted in close to 300 request for various HIP publications in the third project year alone.

The Project has also acquired a phone modem use with the University of Hawaii Special Education Department's Apple II computer, and a subscription to SPECIALNET to enable us to open two-way electronic mail communication with current and potential users of our materials nationwide. We will thus be able to individualize our dissemination efforts, for certain products with interest to smaller groups. Those wishing to purchase HIP materials will be assured of the most rapid replies to their queries about our materials, and will be encouraged to place their orders through SPECIALNET.

HIP has prepared specific flyers for one very popular product--the Adapted Social Studies Curricula for Regular Education Classes (three levels, three volumes)--and these have been distributed at two national conventions, CEC in Detroit and AAMD in Texas. A Publications List has been maintained on the word processor, updated as products reach completion, and distributed at CEC, other national conferences, and on request to parties interested in HIP materials. A complete listing of HIP Dissemination efforts for 1982-1983 is included

Several HIP products have been submitted to the Market Linkage Project for Spcial Education. The Special Friends Program: A Teacher's Manual for Integrated Settings has been reviewed by LINC staff and a description of the manual has been sent to 700 publishers. Notification of the manual's status after publisher review is still pending. The Smallest Minority: Adapted Regular Education Social Studies Curricula For Understanding and and Integrating Severely Disabled Students, Lower Elementary Grades: Understanding Self and Others, Upper Elementary Grades: Understanding Prejudice, Secondary Grades: Understanding Alienation were recently submitted to LINC. Notification of the curriculae progress through the LINC system is pending to date.

HIP staff marketed the Zoo Docent Trainer's Manual: Enhancing Integrated Zoo Experiences for Disabled And Nondisabled Children/Youth during August, 1983. Over 60% of the zoos (national and international) who received our flyer describing the trainer's manual have responded by purchasing (for cost) one or more manuals.

DISSEMINATION REPORT

NAME	DATE	Social Studies Curr's	Special Alternatives	Spec. Friends Manual	Mystery Game	SPEC Odyssey Report	Inservice Training Modules	Acceptance Scale	SIOS & Manual	I.A. Questionnaire	Research Papers	List of HIP Materials	Inservice for Zoo Docents	Papers & Chapters	Other
1. Ontario Assoc. for the Mentally Retarded Canada	1/11/83										1				
2. Salem Public Schools Oregon	1/13/83	3													
3. Waimea School The Big Island, Hawaii	1/14/83	3	1	1											
4. Waiakea Elem. School The Big Island, Hawaii	1/19/83														1
5. DeSilva Elem. School The Big Island, Hawaii	1/20/83	1													
6. Konawaena Elem. School The Big Island, Hawaii	1/24/83														1
7. Honokaa High School The Big Island, Hawaii	1/25/83	1													
8. Special Education Office The Big Island, Hawaii	1/28/83	3	1		1										2
9. Hilo Interm. School The Big Island, Hawaii	2/3/83	1	1												
10. Individual Request Geneseo, NY	2/6/83										1				

NAME	DATE	Social Studies Curr's	Special Alternatives	Spec. Friends Manual	Mystery Game	SPED Odyssey Report	Inservice Training Modules	Acceptance Scale	SIOS & Manual	I.A. Questionnaire	Research Papers	List of HIP Materials	Inservice for Zoo Docents	Papers & Chapters	Other			
11. Waiakea Interm, School The Big Island, Hawaii	2/8/83	1	1															
12. Honokaa Elem. School The Big Island, Hawaii	2/9/83													1				
13. Waiakea Interm. School The Big Island, Hawaii	2/10/83	1	1								1							
14. DeSilva Elem. School The Big Island, Hawaii	2/11/83	1	1		1									2				
15. Individual Request Geneseo, NY	2/18/83										1							
16. Spec. Ed. Res. Network Sacramento, CA	2/23/83									1	1							
17. Beavercreek Local Schools Ohio	2/23/83												1					
18. Student - SUNY Genesco Geneseo, NY	3/4/83										1							
19. Student - SUNY Genesco Geneseo, NY	3/8/83										1							
20. Assistant Prof - SUNY Geneseo, NY	3/8/83										1							

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21. Student - SUNY Genesco Geneseo, New York	3/8/83										1						
22. Individual Request Urbana, Illinois	3/11/83	3							1		1						
23. Research & Dev. Center University of Wisconsin	3/11/83	6							1		2		2				
24. Div. of Spec. Education School District of Phila. Pennsylvania	3/11/83	3									1						
25. North Carolina State University North Carolina	3/11/83	3									1		1				
26. Individual Request Philadelphia, Pennsylvania	3/11/83	3							1		1						
27. Individual Request Morton Grove, Illinois	3/11/83	2							1		1						
28. The Parent Ed. Project United Cerebral Palsy of S.E. Wisconsin	3/16/83										1						
29. Individual Request Rochester, New York	3/18/83										1						
30. Center for Indep. Living The Big Island, Hawaii	3/21/83											1		1			

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31. Individual Request Cleveland, Ohio	3/21/83	3																
32. YMCA-After School Prog. The Big Island, Hawaii	3/29/83	2	1		1							1		2				
33. Mental Health Assoc. in Hawaii	3/28/83										1							
34. Individual Request Oakland, California	3/28/83										1							
35. Severely Handicapped Credential Prog. San Jose State Univ.,California	3/28/83										1							
36. School of Ed., CSU-Sacramento Sacramento, California	3/28/83										1							
37. Spec. Educ. Classes University of Hawaii	3/29/83										38							
38. Dept. of Spec. Educ. Univ. of Northern Iowa	3/30/83	3	1		1		1	1	1	1	2	1		4				
39. San Ysidro School Dist. San Ysidro, California	4/4/83	3	1		1		1	1	1	1	1	1		4				
40. School Health Supp. Services Section Hawaii	4/4/83					16												

NAME	DATE	Social Studies Curr's	Special Alternatives	Spec. Friends Manual	Mystery Game	SPED Odyssey Report	Inservice Training Modules	Acceptance Scale	SIOS & Manual	I.A. Questionnaire	Research Papers	List of HIP Materials	Inservice for Zoo Docents	Papers & Chapters	Other			
41. Individual Request Sacramento, California	4/7/83							1	1		2	1		3				
42. Autism Assess. Intervention Center Dallas, Texas	4/11/83											1						
43. Project REACH San Francisco State University	4/11/83											1						
44. Council of Excep. Child. Convention Detroit, Michigan	4/11/83	12	5	5	5							70						
45. Educ. Dept. UC Santa Barbara Santa Barbara, California	4/13/83							1	1			1						
46. Sylvania Public Schools Ohio	4/20/83											1						
47. Einstein Center Oak Park, Missouri	4/20/83											2						
48. Eaton Interm. School Dist. Michigan	4/20/83											1						
49. Chicago Board of Educ. Chicago, Illinois	4/20/83											1						
50. Individual Request Charlotte, Missouri	4/20/83											1						

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51. Lincoln School Grand Rapids, Missouri	4/20/83										1				
52. Adapted Physical Educ. Michigan State University	4/20/83										1				
53. Board of School Trustees New Brunswick, Canada	4/20/83										1				
54. Individual Request Geneseo, New York	4/20/83										1				
55. Elmo Work Activity Center Iowa	4/20/83										1		1		
56. Old Dominion University Norfolk, Virginia	4/22/83			1							1				
57. Individual Request S. Lake Tahoe, California	4/22/83			1							1				
58. University of Alberta Canada	4/22/83			1							1				
59. Head Teacher San Jose, California	4/22/83			1							1				
60. Individual Request North Newton, Kansas	4/22/83			1							1				

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61. Individual Request Sacramento, California	4/25/83			1														
62. Individual Request Minneapolis, Minnesota	4/25/83			1														
63. Urbana Junior High School Urbana, Illinois	4/29/83										1							
64. The Parent Educ. Proj. United Cerebral Palsy of S.E. Wisconsin	4/29/83	3	1	1			1	1	1	1	3			4				
65. The KIDS Project Berkeley, California	5/2/83			1														
66. Project REACH San Francisco State University	5/4/83	3	2	2			2	2	2	2				4				
67. Depart. of Spec. Educ. University of Northern Iowa	5/9/83			1														
68. Individual Request Philadelphia, Penn. ylvania	5/9/83			1														
69. Research & Dev. Ctr. University of Wisconsin	5/9/83			1														
70. San Ysidro School Dist. San Ysidro, California	5/9/83			1														

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71. Rock LaFeche School Oakland, California	5/11/83										1				
72. Hawaii Dist. Resource Ctr The Big Island, Hawaii	5/11/83			1											
73. Project Teachers DeSilva & Waimea Schools The Big Island, Hawaii	5/11/83			4											
74. Individual Request The Big Island, Hawaii	5/11/83							1							
75. Project Teacher Kailua, Hawaii	5/16/83			1											
76. National Institute for Research in Spec. Ed. Yakemoto PREF, Japan	5/17/83										20			1	
TOTAL PRODUCTS DISSEMINATED	By: 5/31/83	64	17	27	10	16	5	7	8	10	9	173	2	24	11
Local Requests - 20															
Mainland Requests - 52															
International Requests - 4															

NAME	DATE	Social Studies Curr's	Special Alternatives	Spec. Friends Manual	Mystery Game	SPED Odyssey Report	Inservice Training Modules	Acceptance Scale	SIOS & Manual	I.A. Questionnaire	Research Papers	List of HIP Materials	Inservice for Zoo Docents	Papers & Chapters	Social Skills Curriculum		
Dr. Wayne Sailor Project Reach San Fran. State Univ.	6/1/83	3			2												
The Parent Educ. Project of S. E. Wisconsin	6/1/83				1												
American Assoc. of Mental Deficiency Conv. - Dallas, TX	6/1/83	2		1							75						
Jackson County Education Serv. District - SPED Medford, OR	6/14/83			1							1						
Georgia Souther College Slatesboro, GA	6/27/83										1						
Southwest & West Central Ed. Cooperative Serv. Unit, South- west State Univ., Marshall, MN	6/29/83			1							1				*Spec. Net		
Kainalu Elem. School Kailua, HI	6/29/83	3															
San Jose Univ. San Jose, CA	7/25/83										1				*LINC Conf. 7/83		
Washington Asso. for Retarded Citizens Ann Arbor, MI	7/25/83										1						
Jim Patton U. of Hawaii Dept. of SPED	7/25/83								1	3							

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Individual School District #20 St. Johns New Brunswick, CANADA	8/16/83	3		1													
Univ. of Nebraska Medical Ctr C. Louis Meyer Children's Rehabilitation Inst., Omaha, NE	8/05/83									5					Final 2	Rpt	80-81 81-82
Eaton Inter. School District 1790 E. Packard Hwy Charlotte, Mich. 48813	8/16/83	3															
Individual Seattle, WA 98109	8/16/83	1 (2nd)															
Individual Des Moies, IA 50310	8/16/83	1 (2nd)															
Emmet L. Crawley, LINC Res. Inc. 1875 Morse Rd. Suite #225 Columbus, Ohio 43179	8/16/83	1 (2nd)															
Jim Patton Special Education Department University of Hawaii	8/17/83					3	1		1				1				
Individual Fredericton, N.B. Canada E3B 5H1				1		3					1				1		
Individual Campbell, CA 95008				1				1					3				
Pathway School for Exceptional Children Howell, Mich.				1							1						

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Individual Wahiawa, HI 96786				1							1				
Individual Kainalu Elementary School Kailua, Hawaii 96734				1							1				
Audubon Park & Zooligical Garden New Orleans, PA											3	2			
Calgary Zoo, Botanical Gardens & Prehistoric Park Calgary, Alberta, Canada											1	1			0
Cheyenne Mountain Zoological Park Colorado Springs, CO											1	1			
Chicago Zoological Park Brookfield, IL											1	1			
Cleveland Metroparks Zoo Cleveland, Ohio											1	5			
Columbus Zoological Gardens Powell, Ohio											1	1			
Gladys Porter Zoo Brownsville, TX											1	1			
Jackson Zoological Park Jackson, MS											1	1			

NAME	DATE	Social Studies Curr's	Special Alternatives	Spec. Friends Manual	Mystery Game	SPED Odyssey Report	Inservice Training Modules	Acceptance Scale	SIOS & Manual	I.A. Questionnaire	Research Papers	List of HIP Materials	Inservice for Zoo Docents	Papers & Chapters	Social Skills curricul		
John Ball Zoological Gardens Grand Rapids, IL											1	1					
John G. Shedd Aquarium Chicago, IL											1	1					
Kansas City Zoological Gardens Kansas City, MO											1	1					
Little Rock Zoological Gardens Little Rock, ARK											1	1					
Los Angeles Zoo Los Angeles, CA											1	1					
Marineland Rancho Palos Verdes, CA											1	1					
Milwaukee County Zoological Gardens Milwaukee, WI											1	1					
National Aquarium in Baltimore Baltimore, MD											1	1					
National Zoological Park Washington, D.C.											1	1					
New York Zoological Park Bronx, N.Y.											1	1					

NAME	DATE	Social Studies Curr's	Special Alternatives	Spec. Friends Manual	Mystery Game	SPED Odyssey Report	Inservice Training Modules	Acceptance Scale	SIOS & Manual	I.A. Questionnaire	Research Papers	List of HIP Materials	Inservice for Zoo Docents	Papers & Chapters	Social Skills Curriculum		
North Carolina Zoological Park Arheboro, NC	9/83										1	1					
Philadelphia Zoological Gard. Philadelphia, PA	9/83										1	1					
Riverview Park & Zoo Peterborough, Ontario	9/83										1	1					
Roger Williams Park Zoo Providence, RI	9/83										1	3					
St. Louis Zoological Park St. Louis, MO	9/83										1	1					
San Francisco Zoological Gardens San Francisco, CA	9/83										1	1					
Staten Island Zoo Staten Island, NY	9/83										1	1					
Toledo Zoological Gardens Toledo, OH	9/83										1	1					
Tulsa Zoological Park Tulsa, OK	9/83										1	1					
Washington Park Zoo Portland, OR	9/83										1	1					

NAME	DATE	Social Studies Curr's	Special Alternatives	Spec. Friends Manual	Mystery Game	SPED Odyssey Report	Inservice Training Modules	Acceptance Scale	SIOS & Manual	I.A. Questionnaire	Research Papers	List of HIP Materials	Inservice for Zoo Docents	papers & Chapters	Social Skills Curricul.		
Woodland Park Zoological Gardens Seattle, WA											1	1					
Susan Danielevich Redding, CA	9/83	2		1			4				1			1			
Individual, State of Vermont Interdisciplinary Team for Intensive SPED, Montpelier, VT	9/83	3		1	2		3						5				
Individual Honolulu, HI		3		1			4			1				1			
Washington Association for Retarded Citizens											1						
Individual, Dept of SPED San Jose State Univ. San Jose, CA											1						
Preschool Teacher Honolulu				1													
Hawaii Project Teachers of Severely Handicapped														25			
Total Products Disseminated	1/1/83 to 9/30/83	89	17	40	15	16	22	7	9	12	14	291	38	33	25		=	312 material 291 list
																		603 total pieces

Chapter 7

Discussion of Findings and Implications

Multiple measures and strategies have been utilized during the three project years (1980-1983) to obtain information regarding the effects of interactions between nonhandicapped children and severely handicapped peers in integrated public school settings. Antecdotal information obtained by project staff, teachers, students, parents and school personnel has been additive to the information available to evaluate integration efforts in public school and community settings. Overall, data analysis indicates that integration of severely handicapped students into school and community settings has prove to be benefical to both nonhandicapped and handicapped students. The purpose of this chapter is to highlight data reported in depth in Chapter 5 and to suggest implications of the data which has been analyzed.

Effects of Integration Efforts on Nonhandicapped Students

Hawaii Integration staff developed the Special Friends Program to be used as an intervention strategy to assist schools to integrate severely handicapped children/youth into the school community. Implimentation of the Special Firends Program in Hawaii and mainland schools has consistently resulted in significant positive increases in attitudes by nonhandicapped children toward their handicapped peers. In addition, the Special Friends Program and other inservice interventions were successful in an overall increase in positive attitudes by the school as a whole. Comparisons of project to nonproject schools offer additional support to the success of the Special Friends Program intervention strategy. The fact that Kainalu Elementary School participated in the Special Friends Program from 1977 to 1982 and each year there was a significant and positive increase in attitudes of nonhandicapped children toward their severely handicapped peers further demonstrates the effectiveness of an intervention program that promotes a mutually rewarding relationship between peers. In direct contrast, data from Lowe Elementary School which implimented a peer-tutoring program resulted in a significant negative attitudinal change by nonhandicapped students toward their handicapped peers. Considering research efforts have not adequately demonstrated that peer-tutoring of instructional skills is effective for severely handicapped students (Gurralnick, 1976), and the findings from Lowe Elementary school, the peer-tutoring model should not be adopted for the severely handicapped pupulation. Instead, interactions which focus upon personalized interactions between children/youth which encourage reciprocity should continue to be promoted in schools where integration efforts are beginning or occurring.

Changes in Severely Handicapped Students as a result of Integration Efforts

The Systematic Interaction Observation System (SIOS) was used to monitor the behavior of severely handicapped students in nonhandicapped-handicapped dyads and teacher-handicapped dyads. These observations resulted in an abundance of data points in which to analyze differences in child-child vs.

teacher-child dyadic interactions across time for six severely handicapped students (January 1981-May 1983) with additional data points for six other children. Preliminary findings of the data analyzed indicates significant differences in child-child and teacher-child dyads. In child-child dyads, if the nonhandicapped child is at the same eye level as the severely handicapped child it was conducive to various behaviors of the severely handicapped child. Whereas, if the nonhandicapped child is at an eye level higher than the severely handicapped child, other kinds of behaviors are encouraged. In addition, the affect of the nonhandicapped child has an effect on certain behaviors by the severely handicapped child. In general, positive affect of the nonhandicapped child appears to be a good indicator of a variety of positive severely handicapped behaviors. Orientation of the nonhandicapped child to the severely handicapped child appears to have different effects upon different handicapped children. There are also correlations of the severely handicapped child's behaviors with the nonhandicapped child when the nonhandicapped child is oriented to objects. There seems to be a dramatically positive effect upon the severely handicapped child's behavior when the nonhandicapped child looks at the object of focus in the interaction. What has been demonstrated to this point is that there is a cause and effect relationship in the behaviors of severely handicapped children when interacting with nonhandicapped peers and behaviors of the nonhandicapped children have varying effect on different severely handicapped children. Further research and data analysis is needed to identify the reasons for this variable effect on severely handicapped students.

HIP staff has also observed differences in teacher-child and child-child dyads. Interactions between teacher-child and child-child resulted in significantly different behaviors by the severely handicapped child. While both have positive and negative effects on the severely handicapped child's behaviors, each relationship has different effects. Additional research and data analysis seems essential to identify what factors in each dyads lead to desired growth in behaviors of the severely handicapped child.

Effects of Integration Efforts on School Personnel

There has been an overwhelming positive attitude by individual teachers (of severely handicapped students) and/or school staff concerning the philosophy and implimentation of the Speical Friends Program. This has been true for teachers who implimented the program in project schools receiving support from HIP staff or teachers who chose to replicate the Special Friends Program without HIP staff support. The child-child orientation of the Special Friends Program which does not increase a teacher's workload and which promotes positive, independent relationship between nonhandicapped and handicapped children may be the most obvious reasons for easy acceptance of this program. The fact that schools continue to impliment the Special Friends Program (project and replication schools) adds additional support to the acceptance of this intervention strategy.

Research efforts to determine the effects of inservice effort on school staff (Special Friends Program, social studies curriculum, educational games, environmental access survey, etc.) were difficult to obtain. While each school

participated in the Special Friends Program, other inservice activities varied from school to school. What research efforts using the Interactive Activities Questionnaire did reveal is that regular education teachers indicated a positive willingness to promote integrated activities between their regular education students and the severely handicapped students in their school. While generally positive to all integrated activities in the questionnaire, results indicated regular education project teachers prefer integrated activities that are initiated by other school personnel (librarian, regular education students, PE teachers, and special education teachers) and occur outside of the regular teacher's classroom (library, playground, gym, and special education classroom). The activity that elementary regular teachers prefer to initiate themselves and that occur in their classroom was an art activity (a non-competitive, more fun-related activity). Similar results were found of teachers at the secondary level. While these findings are limited and project schools scored similarly to comparison schools, the fact that regular education teachers are willing to promote integrated activities is a revealing finding. Most research effort in this area have focused on measuring the attitudes of regular education teachers rather than examining what behaviors a teacher may or may not want to engage in. The revelance of behavior-oriented research which focuses on teacher behaviors rather than teacher attitudes offers individuals who are promoting integration between severely handicapped and nonhandicapped peers constructive planning alternatives. Future research efforts should continue in this direction, answering questions such as "what activities do you prefer," which activities are most beneficial to all children," and "what scheduling factors help or hinder these activities to occur,"etc.

School Factors Influencing Interactions

There are three major factors operating within the school environment which have considerable effect of the quality and quantity of the interactions between severely handicapped and nonhandicapped students which are (1) location of the classroom for severely handicapped students; (2) the proximity of the severely handicapped classroom to age appropriate peers; and (3) scheduling arrangements. Classrooms for the severely handicapped must be centrally located and next to classrooms with peers of the same age. Many difficulties in promoting interactions between nonhandicapped and handicapped peers are negligible when classrooms are close to age appropriate peers. Interactions happen regularly and consistently when location and proximity are close to peers. Regular and special educators interact more with one another and more activities occur between classes. Scheduling is also a critical factor in promoting interactions. Severely handicapped students must have the same schedules as their regular education peers (e.g. same bus drop time, starting and ending school times, recess, lunch, library, etc.). We have found that scheduling arrangements must be arranged at the beginning of the school year when all school scheduling is completed. Revisions of schedules during the year is frustrating to teachers and other not possible.

The Hawaii Integration Project has added significant strength to the success of integrating severely handicapped students in school and community settings. The benefits to nonhandicapped and severely handicapped children/youth have been adequately demonstrated. The questions to be answered in the future are how to continue to increase the quality and quantity of interactions between handicapped and nonhandicapped peers.

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APPENDIX A

Position Paper

GEORGE R. ARIYOSHI
GOVERNOR

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SUPERINTENDENT

STATE OF HAWAII
DEPARTMENT OF EDUCATION
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OFFICE OF THE SUPERINTENDENT

August 17, 1983

Dr. Robert A. Stodden, Chairman
Department of Special Education
Dr. Norma Jean Hemphill, Director
Hawaii Integration Project
University of Hawaii at Manoa
1776 University Avenue
Honolulu, Hawaii 96822

Dear Drs. Stodden and Hemphill:

Thank you for sharing a copy of your position paper on "Educating All Handicapped Students in Their Neighborhood Public Schools."

I am requesting that Dr. Evelyn Klinckmann, Assistant Superintendent of the Office of Instructional Services and her staff of the Exceptional Children Section meet with you and your staff to discuss its implications for special education students in our public school programs. Mr. Miles Kawatachi will be contacting you shortly to schedule a meeting date.

We share your concern in providing services to handicapped children and look forward to working with you in the future.

Very truly yours,

DONNIS H. THOMPSON
Superintendent

DHT:gm

University of Hawaii at Manoa

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Cable Address: UNIHAW

MEMORANDUM

DATE: March 21, 1983

TO: Dean Andrew In

FROM: Department of Special Education Faculty RS

RE: Position Statement to Be Presented to State Legislators

The faculty of the Department of Special Education are concerned about the continuing trends to centralize special education services throughout the State of Hawaii. Values of normalization, integration, and freedom from stigmatizing labels, as well as, public policy mandates for education in the least restrictive environment with the opportunity for handicapped students to interact with nonhandicapped students, indicate that trends should be in the direction of a decentralized service delivery model. The centralized services now in place in the State of Hawaii preclude the placement of many handicapped students in their neighborhood public schools; the least restrictive environment for many handicapped students is sacrificed for administrative convenience.

In response to the continuing trends to centralize services for handicapped children in the State of Hawaii, the attached position statement will be presented to Donnis Thompson and the State Legislators.

176

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Department of Special Education Faculty

Position Statement:

EDUCATING ALL HANDICAPPED STUDENTS IN THEIR NEIGHBORHOOD PUBLIC SCHOOLS

1. All handicapped students shall be educated in their neighborhood public schools (regardless of the severity of the handicapping condition).

2. There should be a natural proportion of handicapped students to the total population of the school.

3. All handicapped students should be educated in their neighborhood elementary, intermediate and secondary schools respective to their chronological age.

4. Educational placements in neighborhood schools include full-time regular classroom, resource room, and full-time special classroom (with appropriate variations of each placement according to the individual needs of the student).

5. There should be heterogeneous groupings of handicapped students.

6. Resource and special classrooms should be located next to regular education classrooms with students who are the same chronological age.

7. All handicapped children shall be age-appropriately integrated into the normal routines of the school (e.g., recess, lunch, school programs, extracurricular activities, etc.).

POSITION STATEMENTS	PRESENT TRENDS IN HAWAII'S SCHOOLS	DOCUMENTATION APPENDIX A
1. All handicapped students educated in their neighborhood schools	1. In most Hawaii school districts, the trend is to educate mildly to moderately handicapped students in their neighborhood school; in most school districts the trend to centralize placements for moderately-severely handicapped (including mild to severely physically handicapped) students in one or more schools continues.	#1, #4, #8, #10, #16
2. Natural proportion of handicapped to total population of the school	2. This has not been a visible trend in Hawaii public schools.	#1, #2
3. Handicapped students educated in age-appropriate elementary, intermediate and secondary schools	3. The trend is to educate mildly to moderately handicapped students in chronologically age-appropriate elementary, intermediate and secondary schools; in contrast, there is a trend to eduate moderately-severely handicapped students in elementary school regardless of chronological age (and a few intermediate schools).	#5, #11, #12, #14, #15
4. Educational placements include full-time regular classroom, resource room and full-time special classroom	4. These educational placements exist in Hawaii public schools.	#1, #2
5. Heterogeneous groupings of handicapped students	5. The trend is to educate students in homogeneous groupings according to the handicapping condition.	#1, #2, #14
6. Resource and special classrooms should be located next to classrooms with regular education peers	6. The trend in Hawaii schools is to cluster special education classrooms together in one or more wings of the school; access to students of the same chronological age may be limited, discouraged, or not permitted.	#1, #2, #8, #9. #12, #13 #15, #16
7. All handicapped students integrated into normal routines of the school	7. There is a trend to include mild to moderate handicapped students into school routines; there is only a slight trend to include moderately to severely handicapped students into school routines.	#1, #2, #3, #6, #7, #13, #15

Appendix A

DOCUMENTATION FOR POSITION ON EDUCATING ALL HANDICAPPED STUDENTS IN THEIR NEIGHBORHOOD PUBLIC SCHOOLS

LEGAL-LEGISLATIVE

Summary of Legal-Legislative Information: State and federal rulings consistently uphold the rights of all handicapped students to be educated with their nonhandicapped peers in their neighborhood public schools.

#1. P.L. 94-142, 1975: "Handicapped children will be educated in the same setting with nonhandicapped children when possible and always placed in the 'least restrictive environment'". Rarely would it be impossible to place a handicapped child in a regular education elementary school.

a. "Least Restrictive Environment": Procedures to insure that, "to the maximum extent possible, handicapped children...are to be educated with children who are not handicapped and that special classes, separate schooling or other removal...from the regular educational environment occurs only when the nature or severity of the handicap is such that education in regular classes...cannot be achieved satisfactorily."

i. Precedents for "least restrictive environment" are found in legislation prohibiting racial segregation and involving the commitment of handicapped students to residential institutions.

ii. Included under "least restrictive environment" is the stipulation that the child's individual educational program should be available "as close to home as possible."

iii. Parents' rights to challenge the placement of their handicapped child extend beyond "special classes and separate schools to placement in distant schools..."
(cited in Burgdorf, 1980)

#2. Wolf V. Legislature of the State of Utah, 1969: Equates the educational segregation of handicapped children with racial segregation, as "retarding the educational, emotional and mental development of the children," and rules that such educational segregation is unconstitutional. (cited in Burgdorf, 1980)

#3. Architectural barriers are no longer a legal basis for the segregation of handicapped students. (Brown, Branston, Hamre-Nietupski, Johnson, Wilcox, and Gruenwald, 1979).

ADMINISTRATIVE

Placing handicapped students in their neighborhood regular education schools is more cost-effective for the educational system and more beneficial to all school children than centralized services and facilities or special arrangements. (Hemphill, 1982).

#4. Efficient, effective allocation of resources for the education of handicapped students is not necessarily realized through the centralization of services.

a. Examples include busing students outside their immediate community which is costly to the school system and emotionally/physically taxing on the handicapped child; Po'okaina, a segregated special education school housed on a regular education intermediate campus, supports a separate special education administrative staff.

b. Allocation decisions in the past may reflect meeting the needs of administrators and teachers before the needs of handicapped students.

#5. Special Education teachers may benefit from more exposure to regular education colleagues and students for curricular expectations and methodological innovations, professional growth and creativity (Hemphill, 1982; Brown et al., 1979).

#6. Regular education teachers will acquire the skills and attitudes useful for teaching heterogenous groups of students, and will have the opportunity to advocate for all students in public education (Brown et al., 1979).

EDUCATIONAL

Optimal educational opportunities for handicapped and nonhandicapped children occur in integrated, naturalistic settings.

#7. Responsive to Foundation Program Objective #7: This objective, as taught in social studies and counseling and guidance, emphasizes respect for self and others. Consistent with this objective, integration of all students within the school fosters learning respect for all children in the school.

#8. "Least Restrictive Environment" is defined to include: physical setting, individual educational program, and opportunities to interact meaningfully with nonhandicapped children (Kenowitz, Zweibel, and Edgar, 1978).
   a. Unless the individual educational program for each child as legislated by P.L. 94-142 requires some other arrangement, it is best administered "as close as possible to the child's home" (cited in Burgdorf, 1980).

#9. Developmental approaches to early childhood education argue for engaging handicapped children in exploring environments which increasingly exert more complex demands (Bricker, 1978).

#10. Generalized learning, displayed in applied settings, requires more naturalistic settings (e.g., neighborhood school and community), and access to constructive models (e.g., nonhandicapped populations) (Brown, Nietupski, and Hamre-Nietupski, 1976).

#11. Longitudinal interactions with nonhandicapped peers enhance the probability that desired skills, attitudes and values will be realized (Brown et al., 1976).

#12. Imitation learning, a method employed in educating handicapped students, occurs as a result of ongoing observation; active participation (e.g., integrated settings) increases imitation learning (Bricker, 1978).

#13. Opportunities for individualized education for all students may increase through integration measures (Brown, et al., 1979).

SOCIAL-ETHICAL

Integrated neighborhood schools foster positive attitudes toward handicapped children and reinforce the social, intellectual and emotional development of all students.

#14. Handicapped students, as well as regular education students, may be better prepared to function as contributing members of society in heterogeneous groupings throughout their lives, if they are assured the opportunity to participate in heterogeneous educational experiences during their school lives (Hemphill, 1982; Brown et al., 1979; Bricker, 1978; Association for the Severely Handicapped, no date).

#15. Attitudes Toward Handicapped Students.

a. Nonhandicapped Peers

i. Integration and interaction lead to more positive attitudes held by nonhandicapped peers who benefit from direct interaction. Comprehensive findings over four years by the Hawaii Integration Project (Hemphill, 1982; Voeltz, 1982, 1980), indicate that all of the children attending schools where integration has taken place show greater acceptance of handicapped peers than do students at non-participating schools. Further, students in integrated schools who participated directly in integration activities score higher on acceptance scales than do non-participants at the integrated schools (cf Brown, et al., 1979; Bricker, 1978).

ii. Nonhandicapped peers are the future parents of, and service-providers for, the estimated 8 million handicapped people of school age, and therefore could benefit from the skills and attitudes developed as a result of integration (Bricker, 1978).

b. Handicapped students will develop a more positive self-image (Bricker, 1978). Note also preliminary findings of the Hawaii Integration Project, suggesting qualitative improvement in the social and intellectual development of severely handicapped children (Hemphill, 1982).

c. Parents of both handicapped and regular education students can work together as advocates for all students' needs (Hemphill, 1982; Bricker, 1978).

#16. Children who attend neighborhood schools benefit from a comprehensive, long-term support system of peers, siblings and community members.

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*Available upon request. Hawaii Integration Project, University of Hawaii, 1776 University Ave., Wist Hall 208, Honolulu, HI 96822.

APPENDIX B

Inservice Training Materials

July 1, 1983

Dear Dr. Hemphill:

Thank you for giving me the opportunity of reviewing the Hawaii Integration Project. I felt the program is a much needed addition to an elementary Social Studies curriculum. My reactions are outlined in three parts: general reactions, clarity and future implementation. I have integrated the lower and upper elementary grades units in this report.

General Reactions

1. The philosophy that people are people no matter what capabilities they possess is extremely important and much overlooked in traditional programs. Both the elementary and upper grades curricula reflect that philosophy and consistently remind students and teachers of its importance.

2. The programs are both well written and clear even to an individual with no prior special education knowledge.

3. All of the units are important and none seemed redundant or unnecessary.

4. The activities are well varied to keep the attention of students and teachers.

5. By using this program students are given the opportunity of learning more about themselves in addition to gaining knowledge of another group of people.

Clarity

1. The goals and directions for using the specific activities are very clear. The only activity I did not think I could use is character relays on page 58 in the lower elementary grades program. I need another sentence or two describing the outcome.

2. In Activity C on page 14 (Lower Elementary Grades) I thought the question "How was it similar to playing with your best friend?" could be expanded to ask "How was it similar to playing with another friend/your best friend?" There's something very special about playing with best friends and adding the statement another friend may make the students more aware of varying degrees of friendship.

3. Appendix B, Etiquette with People (with disabilities) excluded etiquette with the Hearing Impaired. I didn't understand why this group was excluded.

4. Unit II, Problem Solving Skills & Alternative Methods was an excellent unit. If the teacher needed an additional activity he/she could ask the students to bring in a personal toy then discuss all of the different ways it could be used. Observing different groups of students using the toys discussed could expand the individual's knowledge of Alternative Methods.

5. After reading Unit III: Methods of Communication. I thought it would be an interesting experience for regular education students to just interact with students speaking a foreign (different) language. This may help them understand the isolated feeling of not being able to communicate.

Future Implementation

1. There are so many important concepts to be learned from the curriculum. I feel it could easily be expanded to pre-service and in-service training programs. I think teachers would be more effective facilitators if they could experience some of the concepts with other adults prior to using it with students. It could also be easily integrated in pre-service programs for regular and special education students.

2. Many school districts and colleges are developing programs for training para professionals. Parts of this curriculum could be successfully integrated in these programs.

3. Both the lower and middle grade books can be integrated in the traditional social studies curriculum. Since each book has unique ideas and activities it may be more efficient to package the activities on separate cards with a recommended age or grade level stated. I think this would allow more activities to be used with a greater variety of ages.

After reviewing both books, I feel this program is definitely an excellent addition to the traditional curriculum. Hopefully, it will be extensively disseminated so many students can take advantage of the knowledge to be learned.

If you have any questions relating to this report, please feel free to contact me.

Sincerely,
(letter written in longhand)
Mona Meighan, Ed.D.

kl (typist)

September 19, 1983

Dear Dr. Hemphill:

Thank you for giving me the opportunity to review the Hawaii Integration Project. I am summarizing my reactions by page numbers in the order of the curriculum:

Page 7 - Materials Needed: Typing error - 10 read/10 red

Page 11 - Procedures. B. Discussing Alienation I would include a discussion of self and group alienation.

Page 14 - Evaluating Solutions: You may want to do #2 in a large group instead of small groups to save time.

Page 15 - Summarizing the Activities - I would try to avoid using yes/no responses to questions b to e. The questions could be changed by adding the world "how" (i.e., "How are you more aware of yourselves and others in alienating situations?"). One or all of these questions could be assignedfor a written project.

Page 20 - Surveying a School Area: I would contact a store or facility (i.e., hospital) which has wheelchairs. Many rental stores do not charge for wheelcharis if they are used for awareness activities in schools. Ask the students to complete this section first whithout a wheelchair, then with one. Discuss the differences of both surveys.

Page 24 - Procedures: In #3 I would ask the students to look at their own schedule and discuss how they could be integrated with disabled students.

Page 25 - Learning About Human Rights: The readings in #3 could be passed out before any discussion of Human Rights for background information. Integrate the background information with activities and summary.

Page 26 - Procedures: In "A" I think the student could also have input of the types of activities which could be successfully integrated in the school.

Page 76 - Activities: Some of the activities listed may not be of interest to secondary age students.

After reviewing the curriculum my general reations were most favorable. I felt the program was well written and would be an excellent addition to a secondary curriculum.

If you have any questions regarding my comments, please feel free to contact me.

Sincerely,

Mona Meighan, Ed.D.

The Smallest Minority: Lower Elementary Grades

1. Regular teaching feeling "comfortable" picking up the curriculum and using it.

   I think most teachers would feel "comfortable" with the materials. The possible exceptions is Lesson I in Unit I. I think some lower elementary teachers (especially kindergarten and first grade) will skil this. It would be a very difficult concept for most young children to grasp. (There seems to be many adults who haven't mastered it!) Perhaps more explanation of how to explain this concept could be included to ensure that teacherw would teach this lesson.

2. Clarity of instructions.

   Very clear. On p. 8, C2., I think the word "be" was left out. Also on p. 8, C2b., I wasn't clear on how to implement the directions in the parenthesis.

3. Activities.

   The quality and flow of the activities is excellent. I can see some kindergarten and first grade teachers thinking that the activities ar. too difficult for their students.

   Unit I, Lesson 2, what is the problem in picture 4? I finally say the leg braces but it took a while. You may want to include an explanation, especially for pictures 3 and 4.

   Perhaps somewhere it should be mentioned that teaching students to be understanding of others is a concept that should be taught and reinforced throughout the whole school year. I'm afraid some teachers will teach the lessons in this book and then say nothing about the concept again. Since you are presenting only a limited number of activities, perhaps more needs to to be said about additional resources, reinforcing of concepts, etc.

   Concerning the "References & Resources" sections, are these additional activities teachers can do or are they the sources of your activities?

4. Content.

   The content appears free of bias and to be technically factual.

   In Appendix B, pp. 42-43, I suggest adding something about blind people who use canes.

   In Appendix C, starting with p. 50, how are the Assessment Procedures to be used? Some instructions are needed.

   In the Activities section (p. 56 on), why are secondary activities included?

5. Comments on philosophy/approach.

Excellent. I especially liked your discussion of "handicapped" and "disabled".

Did you consider using the term "general education" or "general educator" rather than "regular education/educator?" I think using the term "regular" implies that special education is "irregular". I don't think that is the idea we're trying to put across!

6. Other.

a. Unit II, Lesson II: Goal 1 wasn't clear to me.

b. Introduction: IEPs on p. 4 sould be spelled out.

c. p. 9, capital R on resources.

d. p. 13, Appendix C is mentioned before B

e. p. 47, difference in type.

f. pp. 16 & 18, B3 and C3 some words not capitalized.

g. Consider including the amount of time each lesson will take (aprox.)

Comments by: Ms. Dena Goplerud
Consultant

The Smallest Minority: Upper Elementary Grades

Many of the comment made for the lower elementary grade curriculum are applicable for this one also.

1. "Comfortable".

   Yes.

2. Clarity of Instructions.

   Very clear.

   P. 8, B4, could be confusing. What group members are you talking about?

   P. 14, C1, may want to give an example of what you mean by the last sentence (i.e., circle).

3. Activities.

   The activities are of excellent quality.

   I would suggest including some summary statements for Unit I and expanding C3 on p.20. I think Lesson I in Unit II really does need a statement on how long to conduct the activity.

4. Content.

   All okey.

5. Philosophy/Approach

   See comments on lower elementary review.

6. Other.

   a. I think this book needs additional resources and activities listed. What you have is excellent but it could use some "fleshing out".

   b. Perhaps Books I and II (probably III also) need to address additional "problems" a teacher might encounter if she/he conducted these activities in a classroom that had disabled students in it. Some teachers might be hesitant to .mplement the activities without this kind of guidance.

   c. Page 11 has a typo. Should be Unit I.

d. Page 17, goals are listed as A, B & C. On page 13, they are listed as 1 and 2. Consistency.

e. Page 18, B4 - print.

f. Introduction. Should something be said about Book 1? Perhaps a short explanation of the activities or how a teacher should refer to it if his/her students haven't participated in thsoe activities?

g. Included a definition of brainstorming for the activities that need it. See p. 14 in Secondary Curriculum.

Comments: Ms. Dena Goplerud
Consultant

ENVIRONMENTAL INVENTORY

WH or AMB

Special Friends: _____ (Name) _____ (Name) Date _____

_____ (Name) _____ (Name) School _____

Place: Office

1. Are there steps leading to the office? _____ yes _____ no	Notes:
2. Is there a ramp leading into the office? _____ yes _____ no	Notes:
3. Are there railings leading to the office? _____ yes _____ no	Notes:
4. Can your special friend enter the office easily? _____ yes _____ no	Notes:
5. Are there railings in the office? _____ yes _____ no	Notes:

170

193

194

6. Can your special friend see over the office counter? Notes:

yes no

7. Can your special friend get to the secretary's desk? Notes:

yes no

8. Can your special friend get to the principal's office? Notes:

yes no

9. Can your special friend move to the vice principal's office? Notes:

yes no

10. Is there any place in the office your special friend can't get to? Notes:

yes no

11. Can your special friend turn around easily in the office? Notes:

yes no

Special Friends: _____ (Name) _____ (Name) Date _____

_____ (Name) _____ (Name) School _____

Place: Cafeteria

1. Are there steps leading to the cafeteria? _____ yes _____ no	Notes:
2. Is there a ramp leading to the cafeteria? _____ yes _____ no	Notes:
3. Are there railings leading to the cafeteria? _____ yes _____ no	Notes:
4. Can your special friend easily enter the cafeteria? _____ yes _____ no	Notes:
5. Are there railings in the cafeteria? _____ yes _____ no	Notes:

6. Can your special friend easily reach the cafeteria helper who collects lunch money or tokens?

Notes:

____ yes ____ no

7. Can your special friend easily reach the counter where the lunch trays are?

Notes:

____ yes ____ no

8. Can your special friend easily move to a table in the cafeteria?

Notes:

____ yes ____ no

9. Can the armrests of your special friend's wheelchair fit under the tables.

Notes:

____ yes ____ no

10. Is there a table where your special friend can sit at without blocking the aisle?

Notes:

____ yes ____ no

11. Can your special friend easily reach the trash can to empty the tray?

Notes:

____ yes ____ no

Special Friends: _____ (Name) _____ (Name) Date _____

_____ (Name) _____ (Name) School _____

Place: Library

1. Are there steps leading to the library? ____ yes ____ no	Notes:
2. Is there a ramp leading to the library? ____ yes ____ no	Notes:
3. Are there railings leading into the library? ____ yes ____ no	Notes:
4. Can your special friend easily enter the library? ____ yes ____ no	Notes:
5. Are there railings in the library? ____ yes ____ no	Notes:

6. Can your special friend easily get to the librarian's desk? Notes:

yes no

7. Can your special friend see over the library counter? Notes:

yes no

8. Can your special friend move between the rows of bookshelves easily? Notes:

yes no

9. Is there a chair in the library that is comfortable for your special friend? Notes:

yes no

10. Is there any place in the library that your special friend can't get to? Notes:

yes no

Special Friends: _____ _____ _____ Date _____
(Name) (Name)

_____ _____ School _____
(Name) (Name)

Place: Classroom

1. Are there steps leading to the classroom? _____ yes _____ no	Notes:
2. Is there a ramp leading to the classroom? _____ yes _____ no	Notes:
3. Is there a railing leading to the classroom? _____ yes _____ no	Notes:
4. Can your special friend easily enter the classroom? _____ yes _____ no	Notes:
5. Is there a railing in the classroom? _____ yes _____ no	Notes:

6. Can your special friend easily reach the blackboard?

_____ yes _____ no

Notes:

7. Can your special friend easily reach the teacher's desk?

_____ yes _____ no

Notes:

8. Write down what other areas in the classroom your special friend <u>can</u> easily reach (like pencil sharpener, books, etc.).

Notes:

9. Write down what other areas in the classroom your special friend <u>cannot</u> easily reach (like pencil sharpener, books, etc.).

Notes:

10. Can the armrests on your special friend's wheelchair fit under a desk in the classroom?

_____ yes _____ no

Notes:

11. Write down what grade you visited.

Notes:

Special Friends: _____ (Name) _____ (Name) Date _____

_____ (Name) _____ (Name) School _____

Place: Recess Area - Equipment

1. Borrow a stopwatch and find out how long it takes for your special friend to get to the recess area.	Notes:
2. Is there any place on the way to the recess area that makes it hard for your special friend to get there (like gravel, dirt, or curves? _____ yes _____ no	Notes:
3. Is there any equipment in the recess area that your special friend <u>can</u> use? Write down what it is. _____ yes _____ no	Notes:
4. Is there any equipment in the recess area that your special friend <u>cannot</u> use? Write down what it is. _____ yes _____ no	Notes:

5. Are there any shortcuts to the playground? Notes:

_____ yes _____ no

6. Can your special friend use the shortcuts? Notes:

_____ yes _____ no

7. Write down what other classes or grades use the same playground as your special friend. Notes:

Special Friends: _____ (Name) _____ (Name) Date _____

_____ (Name) _____ (Name) School _____

Place: Health Room

1. Are there steps leading to the health room? Notes:

   _____ yes _____ no

2. Is there a ramp leading to the health room? Notes:

   _____ yes _____ no

3. Is there a railing leading into the health room? Notes:

   _____ yes _____ no

4. Can your special friend easily enter the health room? Notes:

   _____ yes _____ no

5. Is there a railing in the health room? Notes:

   _____ yes _____ no

6. Can your special friend get to the nurse's desk?

Notes:

_____ yes _____ no

7. Can your special friend get to the bed?

Notes:

_____ yes _____ no

Special Friends: _____ (Name) _____ (Name) Date _____

_____ (Name) _____ (Name) School _____

Place: Drinking Fountains

1. Can your special friend reach the drinking fountain? ____ yes ____ no	Notes:
2. Is there a railing next to the drinking fountain? ____ yes ____ no	Notes:
3. Can your special friend reach the faucets? ____ yes ____ no	Notes:
4. Can your special friend turn the faucet on? ____ yes ____ no	Notes:
5. Does the water stay on by itself? ____ yes ____ no	Notes:

6. Can your special friend drink from the fountain? Notes:

_____ yes _____ no

Special Friends: _____ (Name) _____ (Name) Date _____

_____ (Name) _____ (Name) School _____

Place: Auditorium

1. Are there steps leading to the auditorium? Notes:

   _____ yes _____ no

2. Is there a ramp leading to the auditorium? Notes:

   _____ yes _____ no

3. Are there railings leading into the auditorium? Notes:

   _____ yes _____ no

4. Can your special friend easily enter the auditorium? Notes:

   _____ yes _____ no

5. Are there railings in the auditorium? Notes:

   _____ yes _____ no

6. Can your special friend easily move to the chairs?

Notes:

_____ yes _____ no

7. Is there a place for your special friend's wheelchair so it doesn't block the aisles?

Notes:

_____ yes _____ no

185

FRIENDSHIP SURVEY

Name _____

Date _____

Form Best Friend: _____

1. I like _____ because:

2. My favorite thing to do with _____ is:

3. When I am with _____, I feel:

Name: _____

Date: May 1981

Form: M: _____ ____

1. I like _____ because:

2. My favorite thing to do with _____ is:

3. When I am with _____, I feel:

Name: _____

Date: May 1981

Form: Special Friend

1. I like _____ because:

2. My favorite thing to do with _____ is:

3. When I am with _____, I feel:

APPENDIX C

SIOS and Observers'Schedule

Hawaii Integration Project

Observer Training Schedule
(SIOS)

Wednesday, August 19 (Wist 213)

8:30 - 10:00	Introduction Description of Project and Schools Introduction to Social Interaction and Observation System (SIOS) General Guidelines for Observers Meeting with Vana Vassallo on employment details
Assignment:	Memorize behavioral definitions for "handicapped" (SPED) half of SIOS by Monday.

Monday, August 24 (Wist 213)

8:30 - 9:30	Test on SPED definitions
9:30 - 10:15	Meet with Gloria Kishi on SPED definitions, view videotaped segments, etc.
10:15 - 10:30	Feedback on written test
Assignment:	Memorize behavioral definitions for "nonhandicapped" (NON) half of SIOS by Wednesday and/or review SPED definitions.

Wednesday, August 26 (Wist 213)

8:30 - 9:30	Test on SPED or NON definitions
9:30 - 10:15	Meet with Gloria Kishi on NON definitions, view videotaped segments, etc.
10:15 - 10:30	Feedback on written test and assignment to Group A or B
Assignment:	Review of definitions and memorize position of codes.

Thursday, August 27 (Wist 213)

8:00 - 10:00	Group A - training with Terry Annon
10:00 - 12:00	Group B - training with Terry Annon

Friday, August 28 (Wist 213)

8:00 - 10:00	Group A - training with Terry Annon
10:00 - 12:00	Group B - training with Terry Annon

Schedule test on positions at either 9:30 a.m. or 12:00 Noon, Wist 201.

Monday, August 31 or Thursday, September 1 (Wist 214)

Schedule, in teams of two-three, small group work sessions at your convenience with videotaped samples. Contact: Kathy Schmidt, Wist 215.

Tuesday, September 1 (Wist 213)

11:00 - 12:00 Group meeting: discussion, problems, questions on system, etc. (Jerry, Terry, Gloria, Luanna, Judi & observers)

Wednesday, September 2 through Friday, September 4 (Wist 214)

Schedule individual work sessions. Contact: Kathy Schmidt, Wist 215.
Schedule test sessions on videotape (two).

Friday, September 4 to October 20

Practice on videotapes with weekly quizzes on a selected videotape.

Friday, September 4 to October 11

Visit schools to watch children (no data collection).

Friday, September 4

Weekly meeting with project director to turn in data sheets and discuss difficult coding sessions and receive next week's schedule.

15% of coding sessions done in pairs and kappa coefficients computed.

October 20 to November 25

Data collection in schools in pairs (two observers) and subsequent discussion between observers on discrepant codes.

221/222